STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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Dirk Kempthorne, Governor
Toni Hardesty, Director

Permittee: **Department of Energy (DOE) and DOE-Designated Contractors,**
Idaho National Engineering and Environmental Laboratory,
Idaho Nuclear Technology and Engineering Center (INTEC)
Permit Number: EPA ID# ID4890008952

INTRODUCTION AND SIGNATURE PAGE

Pursuant to the Idaho Hazardous Waste Management Act of 1983 (HWMA), as amended, Idaho Code §§ 39-4401 *et seq.*, and the "*Rules and Standards For Hazardous Waste*," as amended, IDAPA 58.01.05.000 *et seq.*, specifically IDAPA 58.01.05.012 [40 CFR § 270.1(c)(4)], a Partial-Permit (for less than the entire facility) is hereby issued to the United States Department of Energy (DOE) and DOE-designated contractor (see Permit Definitions), hereinafter called the Permittee, to operate a Hazardous Waste Treatment and Storage Facility at the Idaho Nuclear Technology and Engineering Center (INTEC), located at the Idaho National Engineering and Environmental Laboratory (INEEL), which is located in Butte County, Idaho.

The Permittee shall comply with all of the terms and conditions of this Partial-Permit (Permit) and Attachments 1 through 9 of this Permit. The Permittee shall comply with all applicable state regulations, including IDAPA 58.01.05.004 through 58.01.05.013 [40 Code of Federal Regulations (CFR), Parts 124, 260 through 266, 268, and 270], and as specified in this Permit.

Applicable state regulations are those which are in effect on the date of final administrative disposition of this Permit and any self-implementing statutory provisions and related regulations which, according to the requirements of the Hazardous and Solid Waste Amendments (HSWA), are automatically applicable to the Permittee's hazardous waste management activities, notwithstanding the conditions of this Permit.

This Permit is based upon the administrative record, as required by IDAPA 58.01.05.013 [40 CFR § 124.9]. The Permittee's failure (in the Application or during the permit-issuance process) to fully disclose all relevant facts or the Permittee's misrepresentation of any relevant facts, at any time, shall be grounds for the termination or modification of this Permit, and/or initiation of an enforcement action, including criminal proceedings. The Permittee must inform the Director of the Idaho Department of Environmental Quality (DEQ), hereinafter referred to as "Director," of any deviation from the permit conditions or changes in the information on which the Application is based, which would affect the Permittee's ability to comply or actual compliance with the applicable regulations or permit conditions, or which alters any permit condition in any way. The Director shall enforce all conditions of this Permit, which are designated in this Permit as state requirements. Any challenges of any permit condition that concern requirements shall be appealed to the Director, in accordance with IDAPA 58.01.05.996 and the Idaho Department of Environmental Quality Rules and Regulations 58.05.03.000 *et seq.*, "Rules Governing Contested Cases and Declaratory Rulings."

The United States Environmental Protection Agency (EPA) shall maintain an oversight role of the state-authorized program and in such capacity, shall enforce any permit condition based on state requirements if, in the EPA's judgment, the Director should fail to enforce that permit

condition. Any challenges to the EPA-enforced conditions shall be appealed to EPA, in accordance with 40 CFR § 124.19.

This Permit is effective as of **October 18, 2004** and shall remain in effect until **October 18, 2014** unless, in accordance with IDAPA 58.01.05.012, the Permit is revoked and reissued [40 CFR § 270.41], modified [40 CFR § 270.42, Appendix A.6], terminated [40 CFR § 270.43], or continued [40 CFR § 270.51].

September 16, 2004
Date

Toni Hardesty, Director
Department of Environmental Quality

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LIST OF ATTACHMENTS

The following documents are excerpts from the Permittee's Administrative Record, i.e., HWMA Permit Application, supplemental reports, and other documents contained in the Department's supporting file for the draft Permit. The listed documents are hereby incorporated, in their entirety, by reference into this Permit. The Director, as deemed necessary, modified specific language in the Attachments. These modifications are described in the Permit Conditions (Modules I Through VI) and, thereby, supersede the language of the original attachment. If the language of the Permit conflicts with either the attachments or the original application, the language in the Permit shall prevail. These incorporated Attachments are enforceable conditions of this Permit, as modified by the specific permit condition(s).

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B. Section B – Facility Description

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DEFINITIONS

For the purposes of this Permit, the following definitions apply:

a. "Application" means the *HWMA/RCRA Part B Permit Application for the Idaho National Engineering and Environmental Laboratory, Volume 14, Idaho Nuclear Technology and Engineering Center (INTEC) Liquid Waste Management System, Books 1 through 4, Revision 2, October 2003*, the subsequent clarifying data received January 29, 2004, and the Class 3 Permit modification Request dated March 29, 2005.

b. "CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986.

c. "Days" means calendar day(s) unless otherwise specified. Any requirement of submittal under the terms of this Permit that would be due on a Saturday, Sunday, or a federal or state holiday shall be due on the following business day.

d. "Department" means the Idaho Department of Environmental Quality.

e. "Dike" means an embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

f. "Director" means the Director of the Department of Environmental Quality, or their designee, or authorized representative.

g. "Discovery (discovered)" means the initial identification of a SWMU or other Area of Concern, which has the potential to release hazardous waste or hazardous waste constituents to the environment.

h. "DOE" means the United States Department of Energy.

i. "Distillation Operation" means an operation, either batch or continuous, separating one or more feed stream(s) into two (2) or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and vapor phase as they approach equilibrium within the distillation unit. The Process Equipment Waste Evaporator (PEWE) System, the Liquid Effluent Treatment and Disposal (LET & D) System, and the Evaporator Tank System (ETS) qualify as distillation operations.

j. "Facility" means all contiguous land, structures, other appurtenances, and improvements under the control of the Department of Energy at the Idaho National Laboratory, for a total of approximately 890 square miles or 601,260 acres.

k. "Failure" means the inability to achieve a desired end product on the first attempt, or improperly functioning/leaking equipment.

l. "Fractionation Operation" means a distillation operation or method used to separate a mixture of several volatile components of different boiling points in successive stages, each stage removing from the mixture some proportion of one of the components. The LET & D Facility, which recovers nitric acid from the PEWE overhead condensate, is referred to operationally as fractionation but qualifies as a distillation operation.

m. "HSWA" means the Hazardous and Solid Waste Amendments of 1984.

n. "HWMA" means the State of Idaho Hazardous Waste Management Act of 1983, as amended.

o. "Hazardous Waste Management Unit (HWMU)" means those operable units subject to the requirements of IDAPA 58.01.05.012 (40 CFR § 270.14 to 270.29).

p. "IDAPA" means the Idaho Administrative Procedures Act, Chapter 52, Title 67, Idaho Code.

q. “INL” means the Idaho National Laboratory, the Facility. The INL was formerly known as the Idaho National Engineering and Environmental Laboratory (INEEL).

r. "Mixed Waste" means waste that is both hazardous and radioactive.

s. "Off-Site" means off the "facility" as defined in "j" of this definition section.

t. “On-Site" means on the "facility" as defined in "j" of this section.

u. “Open-ended valve, line or pipe” means any valve, except pressure relief valves, having one side of the valve seat in contact with hazardous waste and one side open to the atmosphere, either directly or through an open pipe.

v. "Operator" means the DOE-designated Contractor that has operational responsibilities and control of the HWMU. The DOE-designated Contractor, as operator for INL, is CH2M♦WG ~~Hill Washington Group International~~Idaho, LLC (CWI). CWI reports to the DOE-ID.

w. "Owner" means the United States Department of Energy (DOE).

x. "Permittee" means both DOE, as owner, and the DOE-designated Contractor.

y. "Process Vent" means any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or through a tank (e.g., distillate

receiver, condenser, bottoms receiver, surge control tank, separator tank, or hot well) associated with hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations.

z. "RCRA" means the Resource Conservation and Recovery Act of 1976, as amended in 1984.

aa. “Readily retrievable” shall mean available upon request from the Director, given the following: 1) Provided to the Director within one working day if the document is less than three years old, and 2) Provided to the Director within seven working days if the document is greater than three years old.

bb. "Release" means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous and/or mixed wastes (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous and/or mixed wastes or hazardous and/or mixed waste constituents).

cc. "Shutdown" means eliminating the feed and/or steam into a unit.

dd. "Solid Waste Management Unit" (SWMU) means any discernable unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous wastes. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

ee. "Tank" means a stationary device, designed to contain an accumulation of hazardous waste, which is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic), which provide structural support.

All definitions contained in IDAPA 58.01.05.004, .005, .008, and .010 through .013 (40 CFR Parts 260, 261, 264, 266, 268, 270, and 124) are hereby incorporated (in their entirety) by reference into this Permit, except that any of the definitions used above shall supersede any definition of the same term given in IDAPA 58.01.05.000 et seq. Where terms are not defined in the regulations or the Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

ACRONYMS AND ABBREVIATIONS

ACMM	Analytical Chemistry Methods Manual
AE	Architectural Engineer
ALARA	As low as reasonably achievable (radiation exposures)
~~APCS~~	~~Air Pollution Control System~~
API	American Petroleum Institute
APS	Atmospheric Protection System
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFA	Central Facilities Area
CFR	Code of Federal Regulations
COPC	Compound of Potential Concern
CPP	Chemical Processing Plant
CRR	Carbon Reduction Reformer
DCS	Distributed Control System
DEQ	Department of Environmental Quality
DMR	Denitration and Mineralization Reformer
DOE	Department of Energy
DOE-HQ	Department of Energy - Headquarters
DOE-ID	Department of Energy - Idaho Operations Office
DOT	Department of Transportation
DQO	Data Quality Objective
EAL	Emergency Action Level
EAM	Emergency Action Manager
EC	Emergency Coordinator
ED	Emergency Director
EDF	Engineering Design File
EDMS	Electronic Document Management System
EMCAP	Environmental Management Consolidated Audit Program
EOC	Emergency Operations Center
EP/RCRA CP	Emergency Plan, RCRA Contingency Plan
EPA	(United States) Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-To-Know Act
ERO	Emergency Response Organization
ERPG	Emergency Response Planning Guideline
ETS	Evaporator Tank System
FFA/CO	Federal Facilities Agreement/Consent Order
FR	Facility Representative (~~WDS~~WGS)
g	gram
GERT	General Employee Radiation Training
HEPA	High-Efficiency Particulate Air

HLLWE	High Level Liquid Waste Evaporator (ETS)
HQ	Hazard Quotient
HSWA	Hazardous and Solid Waste Amendments of 1984
HWMA	Hazardous Waste Management Act of 1983, as amended
HWMU	Hazardous Waste Management Unit
HWN	Hazardous Waste Number
ICDF	INL CERCLA Disposal Facility
IDAPA	Idaho Administrative Procedures Act
ILWMS	INTEC Liquid Waste Management System
INL	Idaho National Laboratory
INEEL	Idaho National Engineering and Environmental Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
"	Inch(es)
IWTS	Integrated Waste Tracking System
IWTU	Integrated Waste Treatment Unit
LDR	Land Disposal Restrictions
LET&D	Liquid Effluent Treatment and Disposal
LRA	Level Recorder Alarm
M&O	Management and Operating
MOU	Memorandum of Understanding
MSDS	Material Safety Data Sheet
NWCF	New Waste Calcining Facility
No.	Number
NRC	Nuclear Regulatory Commission
OJT	On-the-Job Training
OSC	On-Scene Commander
OSHA	Occupational Safety and Health Administration
P&ID	Piping and Instrumentation Diagram
PAG	Protective Action Guide
PE	Professional Engineer
PEW	Process Equipment Waste
PEWE	Process Equipment Waste Evaporator
PIR	Product of Incomplete Reaction
PK	Process Knowledge
POG	Process Off-gas
PPE	Personal Protective Equipment
ppm	parts per million
PWL	Process Waste Liquid
QA/QC	Quality Assurance/ Quality Control
RAL	Remote Analytical Laboratory
RCRA	Resource Conservation and Recovery Act
RGP	Rare Gas Plant
SAT	Systematic Approach to Training
SLRA	Screening Level Risk Assessment

SCBA	Self-Contained Breathing Apparatus
SVOC	Semi-Volatile Organic Constituents
SW-846	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods
SWMU	Solid Waste Management Unit
TBP	Tributyl Phosphate
TCLP	Toxicity Characteristic Leaching Procedure
TFF	Tank Farm Facility
TFT	Tank Farm Tanks
TOC	Total Organic Carbon
TSDF	Treatment, Storage, and Disposal Facility
TSS	Total Suspended Solids
UHC	Underlying Hazardous Constituent
USGS	United States Geological Survey
UTS	Universal Treatment Standards
VOC	Volatile Organic Constituents
VOG	Vessel Off-Gas
WAC	Waste Acceptance Criteria
WAP	Waste Analysis Plan
WC	Water Column
WCC	Warning Communications Center
WDDF	Waste Determination and Disposition Form
W~~D~~GS	Waste ~~Disposition~~ Generator Services
WTS	Waste Technical Specialist
WWH	Westside Waste Hold-up (tanks)

MODULE I - STANDARD PERMIT CONDITIONS

I.A. EFFECT OF PERMIT

The Permittee is allowed to store and treat liquid mixed waste in the Idaho Nuclear Technology and Engineering Center Liquid Waste Management System (ILWMS) in accordance with the conditions of this Partial-Permit. Any storage or treatment of liquid mixed waste in the Hazardous Waste Management Units (HWMU) described herein, not authorized in this Permit, is prohibited.

Pursuant to IDAPA 58.01.05.012 [40 CFR § 270.4], compliance with this Permit generally constitutes compliance (for purposes of enforcement) with the Idaho Hazardous Waste Management Act (HWMA) of 1983, as amended, except for the requirements not included in this Permit, which become effective by future statute or regulatory changes, to include those requirements promulgated under IDAPA 58.01.05.011 [40 CFR Part 268] restricting the placement of hazardous and/or mixed waste in or on the land. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law or regulations, as specified in IDAPA 58.01.05.012 [40 CFR § 270.4].

I.A.1. The Department of Energy (DOE) is the owner and is responsible for the activities that include policy, programmatic, funding, and scheduling decisions, as well as general oversight.

I.A.2. The DOE-designated contractor, as operator, is responsible for the day-to-day operations of the assigned permitted units and for all permitted activities related to the assigned units, for which the DOE-designated contractor, its agents, employees, or subcontractors have operational control including waste characterization and handling, monitoring, record keeping, reporting, and contingency planning.

I.B. ENFORCEABILITY

The terms and conditions of this Permit are enforceable pursuant to the HWMA or any other applicable federal, state, or local law. Violations of this Permit may result in civil penalties, in accordance with the HWMA (Idaho Code § 39-4414) and the HWMA Civil Penalty Policy.

I.B.1. Any person who knowingly makes any false statement or representation in any application, label, manifest, record, report, permit, or other document filed, maintained, or used for the purposes of complying with the provisions of Idaho Code § 39-4415 shall be guilty of a misdemeanor and subject to a fine of not more than ten

thousand dollars ($10,000) or imprisonment not to exceed one (1) year, or both, for each separate violation or for each day of a continuing violation.

I.C. OTHER AUTHORITY

The Department expressly reserves any right of entry provided by law and any authority to order or perform emergency or other response activities as authorized by law.

I.D. PERMIT ACTIONS

I.D.1. This Permit may be modified, revoked and reissued, or terminated for cause as specified in IDAPA 58.01.05.012 [40 CFR §§ 270.41, 270.42, or 270.43].

I.D.2. The filing of a request for a Permit Modification, revocation and reissuance, or termination, or the notification of planned changes, or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition.

I.D.3. The Director may modify this Permit when the standards or regulations on which the Permit was based have been changed by statute, amended standards or regulations, or by judicial decision after the effective date of this Permit.

I.D.4. Except as provided by specific language in this Permit or except for the Director's approval of a Class 1 or 2 Permit Modification, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.42(a) and (b)], any modifications which substantially alter INL or its operation as covered by this Permit shall be administered as a Class 3 Permit Modification prior to such change taking place, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.42(c)].

I.D.5. Within forty five (45) days of a Permit Modification being put into effect or approved, the Permittee shall provide clean copies of the relevant portions of the Permit and Attachments to incorporate the change (if not already reflected/provided in the change pages submitted with the Permit Modification Request), reprint the documents (as necessary), and submit them to the Director.

I.D.6. The Permittee shall ensure that Attachment 9 is current, consistent with Permit Condition I.D.5.

I.E. SEVERABILITY

The provisions of this Permit are severable; and if any provision of this Permit or the Application of any provision of this Permit to any circumstance is held invalid, the Application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. Invalidation of any state or federal statutory or

regulatory provision, which forms the basis for any condition of this Permit, does not affect the validity of any other state or federal statutory or regulatory basis for said provision.

I.F. DUTIES TO COMPLY

I.F.1. The Permittee shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an Emergency Permit issued in accordance with IDAPA 58.01.05.012 [40 CFR § 270.61]. Any permit noncompliance, other than noncompliance authorized by an Emergency Permit, constitutes a violation of HWMA and is grounds for enforcement action or permit termination, revocation and reissuance, or modification of the Permit, or denial of a Permit Renewal Application as specified in IDAPA 58.01.05.012 [40 CFR § 270.30(a)].

I.F.2. Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under §§ 3007, 3008, 3013, or 7003 of RCRA [42 U.S.C. §§ 6927, 6928, 6934 and 6973], §§ 104, 106(a), or 107 of CERCLA [42 U.S.C. §§ 9604, 9606(a), or 9607], as amended by the Superfund Amendments and Reauthorization Act of 1986, or any other state or federal law providing for protection of public health or the environment from any imminent and substantial endangerment to human health or the environment.

I.G. DUTY TO REAPPLY

If the Permittee wishes to continue an activity allowed by this Permit after the expiration date of this Permit, the Permittee shall submit a new Application a minimum of one hundred eighty (180) calendar days prior to the expiration of this Permit, in accordance with IDAPA 58.01.05.012 [40 CFR §§ 270.10(h) and 270.30(b)].

I.H. PARTIAL PERMIT EXPIRATION

Except as renewed, modified, revoked, reissued, or terminated by the Department, this Permit shall automatically expire ten (10) years from the effective date of this Permit.

I.I. CONTINUATION OF EXPIRING PERMIT

This Permit and all conditions herein shall continue in force until the effective date of a new permit, if the Permittee has submitted a timely and complete Application, in accordance with IDAPA 58.01.05.012 [40 CFR § § 270.10, 270.13 through 270.29], and through no fault of the Permittee, the Director has neither issued or denied a new permit under IDAPA 58.01.05.013 [40 CFR § 124.15] on or before the expiration date of this Permit.

I.J. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit, as specified in IDAPA 58.01.05.012 [40 CFR § 270.30(c)].

I.K. DUTY TO MITIGATE

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment resulting from the noncompliance, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(d)].

I.L. PROPER OPERATION AND MAINTENANCE

The Permittee shall, at all times, properly operate and maintain all facilities and controls (and related appurtenances), which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary equipment or similar systems only when necessary to achieve compliance with the conditions of this Permit, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(e)].

I.M. DUTY TO PROVIDE INFORMATION

The Permittee shall furnish to the Department and/or the Director, within a reasonable time, any relevant information which the Department and/or the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also furnish to the Department and/or the Director, upon request, copies of records required to be kept by this Permit, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(h)].

I.N. INSPECTION AND ENTRY

Pursuant to IDAPA 58.01.05.012 [40 CFR § 270.30(i)], the Permittee shall allow the Department, the Director, and/or their authorized officers, employees, or representatives (upon the presentation of credentials and other documents as may be required by law) to:

I.N.1. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records are kept as required by the conditions of this Permit;

I.N.2. Have access to and copy, at reasonable times, any records that are kept as required by the conditions of this Permit;

I.N.3. Inspect at reasonable times any portion of the facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and

I.N.4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the HWMA or RCRA, any substances or parameters at any location.

I.O. MONITORING AND RECORDS

I.O.1. The Permittee shall retain copies of all reports required by this Permit, the certification required by IDAPA 58.01.05.008 and .012 [40 CFR §§ 264.73(b)(9) and 270.30(j)(2)], and records of all data used to complete the Application for this Permit for a period of at least three (3) years from the date of the report, record, or certification unless a longer retention period for certain information is required by other conditions of this Permit.

I.O.2. Pursuant to IDAPA 58.01.05.012 [40 CFR § 270.30(j)(3)], records of monitoring information shall specify:

I.O.2.a. The date(s), exact place, and times of sampling or measurements;

I.O.2.b. The name(s) of individuals who performed the sampling or measurements;

I.O.2.c. The date(s) analyses were performed;

I.O.2.d. The name(s) of individuals who performed the analyses;

I.O.2.e. The analytical techniques or methods used; and

I.O.2.f. The results of such analyses, including the Quality Assurance/Quality Control summary.

I.O.3. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(j)(1)]. The method used to obtain a representative sample of the waste to be analyzed shall be the appropriate method from IDAPA 58.01.05.005 [40 CFR Part 261, Appendix I], or an equivalent method approved by the Director.

Laboratory methods shall be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, Standard Methods for the Examination of Water and Wastewater (prevailing edition), or other alternate methods approved in this Permit, or an equivalent method in accordance with Permit Condition I.O.4. of this Permit.

I.O.4. The Permittee may substitute analytical methods, which are equivalent or superior to those specifically approved for use in this Permit, in accordance with the following:

I.O.4.a. The Permittee submits to the Director a request for substitution of analytical method(s) specifically approved for use in this Permit. The request shall provide information demonstrating that the proposed method(s) requested to be substituted are equivalent or superior in terms of sensitivity, accuracy, and precision (i.e., reproducibility); and

I.O.4.b. The Permittee receives a written approval from the Director for the substitution of analytical method(s). Such approval shall not require a Permit Modification under IDAPA 58.01.05.012 [40 CFR § 270.42].

I.P. REPORTING PLANNED CHANGES

The Permittee shall give notice as soon as possible to the Director of any planned physical alteration or additions to the permitted facility, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(l)(1)].

I.Q. REPORTING ANTICIPATED NONCOMPLIANCE

The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with requirements of this Permit, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(l)(2)]. Advance notice shall not constitute a defense for any noncompliance.

I.R. CERTIFICATION OF CONSTRUCTION OR MODIFICATION

I.R.1. The Permittee may not commence storage or treatment of mixed waste in a new permitted HWMU or in a modified portion of an existing permitted HWMU, except as provided in IDAPA 58.01.05.012 [40 CFR § 270.42], until the Permittee has submitted to the Director by certified mail, express mail, or hand-delivered letter, along with the Attachments required under Permit Condition II.A.2., signed by the Permittee, and a registered professional engineer certifying that the permitted unit(s) at INL have been constructed or modified, in accordance with the approved plans and specifications in compliance with this Permit (IDAPA 58.01.05.012 [40 CFR § 270.30(l)]); and

I.R.2. The Director has reviewed and inspected (if deemed appropriate) the modified or newly constructed unit(s), and has notified the Permittee in writing that the unit(s) were found in compliance with the conditions of this Permit; or

I.R.3. If within fifteen (15) calendar days after the date of submission of the letter, in Permit Condition I.R.1. of this Permit, the Permittee has not received notice from the Director of the intent to inspect, prior inspection is waived; and the Permittee may commence storage or treatment of hazardous and mixed waste in the permitted unit(s), certified in accordance with Permit Condition I.R.1. of this Permit.

I.S. TRANSFER OF PERMIT

This Permit shall be transferred to a new owner or operator only if it is modified or revoked and reissued, pursuant to IDAPA 58.01.05.012 [40 CFR § 270.40]. Prior to transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator, in writing, of the requirements of IDAPA 58.01.05.008 and 58.01.05.012 [40 CFR Parts 264 and 270] and this Permit.

I.T. TWENTY-FOUR HOUR REPORTING

I.T.1. In accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(l)(6)], the Permittee shall verbally report to the Idaho State Communications Center any noncompliance with this Permit, which may endanger human health or the environment, within twenty-four (24) hours from the time the Permittee becomes aware of the noncompliance, including:

I.T.1.a. Noncompliance with Permit Condition II.A.1. of this Permit; or

I.T.1.b. Information concerning a release of any mixed waste that may endanger public drinking water supplies; or

I.T.1.c. A release or discharge of mixed waste, or of a fire or explosion at the INL that could threaten human health or the environment outside the facility.

I.T.2. The description of the occurrence and its cause shall, at a minimum, include:

- Name, title, and telephone number of the individual reporting;
- Name, address, and telephone number of the owner or operator;
- Name, address, and telephone number of the facility;
- Date, time, and type of incident;
- Location and cause of the accident;
- Name and quantity of materials involved;
- The extent of injuries, if any;

- An assessment of actual or potential hazards to the environment and human health, where this is applicable;
- Description of any emergency action taken to minimize possible threat(s) to human health and the environment;
- Estimated quantity and disposition of recovered material that resulted from the incident; and
- Any other information necessary to evaluate the situation fully, and to develop an appropriate course of action.

I.T.3. Within five (5) calendar days after the Permittee is required to provide verbal notification, as specified in Permit Condition I.T.1. of this Permit, the Permittee shall provide to the Director a written submission.

I.T.3.a. The written submission shall include, but not be limited to, the following:

- Name, address, and telephone number of the individual reporting;
- A description (include cause, location, extent of injuries (if any), and an assessment of actual or potential hazard(s) to the environment and human health outside the INL, where this is applicable) of the incident (noncompliance and/or release);
- The period(s) in which the incident (noncompliance and/or release) occurred (including exact dates and times);
- Whether the results of the incident remain a threat to human health and the environment (whether the noncompliance has been corrected and/or the release has been adequately remediated); and
- If not, the anticipated time it is expected to continue and the steps taken or planned to reduce, eliminate, and prevent re-occurrence of the noncompliance, and/or the steps taken or planned to adequately remediate the release.

I.T.4. The Permittee need not comply with the five (5) calendar day written notice requirement, if the Director waives the requirement and the Permittee submits a written report within fifteen (15) calendar days from the time the Permittee is required to provide verbal notification, as specified in Permit Condition I.T.1. of this Permit.

I.U. OTHER NONCOMPLIANCE

The Permittee shall report, on a semi-annual basis from the effective date of the Permit, all other instances of noncompliance not otherwise required to be reported, in accordance with Permit Condition I.T. of this Permit, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(l)(10)]. The reports shall contain the information, as applicable, listed in Permit Condition I.T. of this Permit. Reporting shall not constitute a defense for any noncompliance.

I.V. OTHER INFORMATION

Whenever the Permittee becomes aware that any relevant information was omitted in the Permit Application or incorrectly submitted in the Permit Application, or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director in accordance with Permit Condition I.Y. of this Permit, and in accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(l)(11)].

I.W. SIGNATORY REQUIREMENT

All applications, reports, or information requested by or submitted to the Director shall be signed and certified, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.11] and submitted in accordance with Permit Condition I.Y.

I.X. CONFIDENTIAL INFORMATION

Pursuant to Title 9, Chapter 3, of the Idaho Code, IDAPA 58.01.05.012 [40 CFR § 270.12] or any other applicable federal, state, or local law, the Permittee may assert a claim of confidentiality regarding any information required to be submitted pursuant to this Permit. The Department shall determine whether said information is exempt from disclosure, pursuant to applicable law.

I.Y. REPORTS, NOTIFICATIONS, AND SUBMISSIONS

All reports, notifications, or other submissions, which are required by this Permit and IDAPA 58.01.05.012 [40 CFR § 270.5], shall be sent or given to the Director in duplicate by certified mail, express mail, or hand-delivered to:

Director
c/o Hazardous Waste Program Manager
Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706-1255
Telephone No. (208) 373-0502

Twenty-four (24) hour telephone number 1-800-632-8000

The addresses and telephone numbers listed above are current as of the effective date of this Permit and may be subject to change.

I.Z. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

I.Z.1. The Permittee shall maintain until closure is completed and certified by an independent, registered, professional engineer, the following documents and amendments, and revisions or modifications to these documents:

I.Z.1.a. A complete copy of this Permit including attachments and tables;

I.Z.1.b. Waste Analysis Plan(s) for each HWMU of this Permit, as required by IDAPA 58.01.05.008 [40 CFR § 264.13] and this Permit;

I.Z.1.c. Operating Record, as required by IDAPA 58.01.05.008 [40 CFR § 264.73] and this Permit;

I.Z.1.d. Inspection procedures, schedules, logs, and records for each HWMU of this Permit, as required by IDAPA 58.01.05.008 [40 CFR §§ 264.15(b)(2), 264.73(b)(5)] and this Permit;

I.Z.1.e. Personnel training requirements for each position, and personnel training records for each individual involved with management or treatment of mixed waste at each HWMU in this Permit, as required by IDAPA 58.01.05.008 [40 CFR § 264.16(d)] and this Permit;

I.Z.1.f. The Site-wide Contingency Plan and Contingency Plan(s) for each HWMU of this Permit, as required by IDAPA 58.01.05.008 [40 CFR § 264.53(a)] and this Permit;

I.Z.1.g. Closure Plan(s) for each HWMU of this Permit, as required by IDAPA 58.01.05.008 [40 CFR § 264.112(a)] and this Permit.

I.Z.2. Documents, as specified by this Permit, may be maintained at INTEC records storage, records storage in Idaho Falls, and/or Electronic Document Management System [EDMS] Records Vault in a readily retrievable manner. These documents may be maintained solely using an electronic format, as long as the documents are readily retrievable to obtain a printed copy.

MODULE II - GENERAL FACILITY CONDITIONS

II.A. DESIGN AND OPERATION OF FACILITY

II.A.1. The Permittee shall construct, maintain, and operate all permitted HWMUs on the INL to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous and mixed waste or hazardous and mixed waste constituents to the air, soil, ground water, or surface water which could threaten human health and/or the environment.

II.A.2. The Permittee shall construct and/or maintain all HWMUs in accordance with the approved designs, specifications, and maintenance schedules that are included as Attachments 1 through 9 of this Permit. Minor deviations from the approved designs or specifications, necessary to accommodate proper construction and the substitution of equivalent or superior materials or equipment, shall be noted on the as-built drawings and the rationale for those deviations shall be provided in narrative form. After completion of construction or modification of each new HWMU, the Permittee shall submit final as-built drawings and the narrative report to the Director as part of the construction certification documentation specified in Permit Condition I.R.

II.A.3. The Permittee shall comply with all applicable requirements of the Land Disposal Restrictions of IDAPA 58.01.05.011 [40 CFR Part 268].

II.A.4. The Permittee shall inspect all transfer lines from which there has been a release, suspected release, or unexplained volume of missing transferred waste, and for which a report was filed under the requirement of Permit Conditions I.T. or I.U. The suspect transfer lines shall not be returned to service until the integrity of the line has been demonstrated.

II.B. RECEIPT OF OFF-SITE WASTE

II.B.1. The Permittee shall not accept into the ILWMS mixed waste generated off-Site.

II.C. WASTE ANALYSIS PLAN

The Permittee shall comply with the procedures and requirements of the Waste Analysis Plan provisions, in accordance with IDAPA 58.01.05.008 and 58.01.05.011 [40 CFR §§ 264.13 and 268.7] and Attachment 2 of this Permit, and as follows:

II.C.1. The Permittee shall collect representative samples of waste to be analyzed in accordance with IDAPA 58.01.05.005, 58.01.05.008, and 58.01.05.011 [40 CFR Part 261, Appendix I and 40 CFR §§ 264.13(a) and 268.7], and as specified in Attachment 2 of this Permit.

II.C.2. The Permittee shall perform the analysis of each waste stream in accordance with the latest edition of Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846, Standard Methods for the Examination of Water and Wastewater (prevailing edition), or equivalent method approved by the Director in accordance with Permit Condition I.O.3. and I.O.4. of this Permit. At a minimum, the Permittee shall maintain proper functional instruments, use-approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations. If the Permittee uses a contract laboratory to perform analyses, the Permittee shall notify the laboratory in writing of the waste analysis conditions it is to meet, in order that waste analysis conditions of the Permit are met.

II.C.3. The Director, based on data provided, approves the use of a double-needle sampler when collecting mixed waste volatile organic and total organic samples from the ILWMS.

II.C.3.a. Double-needle sampling results must not be used in Land Disposal Restriction certifications.

II.C.3.b. Analytical data obtained from double-needle sampling may be used for demonstrating compliance with IDAPA 58.01.05.008 [40 CFR Part 264 Subpart AA].

II.C.3.c. The appropriateness of the double-needle sampling procedures shall be re-confirmed by comparing the resulting analytical data results correlated with the off-gas data generated as part of the Permit Condition II.Q. requirements.

II.C.3.c.1. The appropriateness of the double-needle sampling procedure shall be reconfirmed three or more times during the life of this permit.

II.C.3.c.2. If this comparison does not reconfirm the validity of the double-needle sampling procedure, the Permittee shall submit a Permit Modification Request, in accordance with Permit Condition I.D., within sixty days to revise the Waste Analysis Plan.

II.D. SECURITY

The Permittee shall comply with the Security Provisions of IDAPA 58.01.05.008 [40 CFR § 264.14] and the INL site-specific security measures described in Attachment 3 of this Permit.

II.E. INSPECTION PLAN

The Permittee shall comply with the inspection provisions of IDAPA 58.01.05.008 [40 CFR § 264.15] and as follows:

II.E.1. The Permittee shall maintain the inspection schedules and logs, in accordance with Permit Condition I.Z.1.d. and I.Z.2. of this Permit;

II.E.2. The Permittee shall comply with the inspection schedules and logs for the INL, as included in Attachment 4 of this Permit;

II.E.3. The Permittee shall remedy, as required by IDAPA 58.01.05.008 [40 CFR § 264.15(c)], any deterioration or malfunction discovered by an inspection;

II.E.4. The Permittee shall retain the inspection procedures, schedules, logs and records required by Permit Condition II.E.1., in accordance with Permit Condition I.Z.1.d. and I.Z.2. of this Permit;

II.E.5. The Permittee shall inspect the Cathodic Protection System for proper operation at least annually; and all sources of impressed current shall be inspected and/or tested bi-monthly, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.195(c)].

II.E.6. The Permittee shall monitor the liquid level in the Westside Waste Holdup Tanks (VES-WL-103, VES-WL-104, and VES-WL-105) on a daily basis to ensure waste volume has not increased/decreased.

II.E.6.a. The Permittee shall report any detectable level change, in accordance with Permit Condition I.T.1.

II.E.6.b. The Permittee shall determine the cause of the level change, perform remedial measures as appropriate, and submit a written report to the Director, outlining the circumstances of the event, within thirty (30) days of discovery.

II.E.7. The Permittee shall record inspections on the inspection logs and inspection log sheets, required by Permit Condition II.E.1., as specified in IDAPA 58.01.05.008 [40 CFR § 264.15(d)]. At a minimum, the following information shall be recorded:

- The date and time of the inspection;
- The name of the inspector;
- A notation of the observations made; and
- The date and nature of any repairs or other remedial actions.

II.E.8. The Permittee shall inspect the instrumentation found in Attachment 1 Section D of this permit, at a minimum, according to the Operations and Maintenance Schedule provided with the instrument list.

II.F. TRAINING PLAN

II.F.1. The Permittee shall comply with the INL Personnel Training Plan, as included in Attachment 5 of this Permit and in accordance with IDAPA 58.01.05.008 [40 CFR § 264.16], until each HWMU is fully closed and certified.

II.F.2. The Permittee shall ensure that all personnel who handle mixed waste are trained in mixed waste management, safety, and emergency procedures, as applicable to their job description, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.16(a)] and the Personnel Training Plan included in Attachment 5 of this Permit.

II.F.3. The Permittee shall maintain the Personnel Training Plan in Attachment 5 of this Permit and documentation of personnel training received, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.16(e)] and Permit Condition I.Z.1.e. and I.Z.2. of this Permit.

II.G. PREPAREDNESS AND PREVENTION

The Permittee shall comply with the Preparedness and Prevention Provisions of IDAPA 58.01.05.008 [40 CFR Part 264 Subpart C] and as follows:

II.G.1. The Permittee shall operate the permitted INTEC Units so as to minimize the possibility of a fire, explosion, or sudden or non-sudden releases to the air or soil (which could threaten human health or the environment), in accordance with IDAPA 58.01.05.008 [40 CFR § 264.31] and Attachment 6 of this Permit.

II.G.2. At a minimum, the Permittee shall perform preventative maintenance and repair of the INL emergency equipment, safety devices, and miscellaneous equipment included in the Attachments of this Permit, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.33] and the manufacturer's specifications. The Permittee shall maintain records of these preventative maintenance and repair activities on this equipment and schedules, reflecting minimum and planned performance of these preventative maintenance activities in the Operating Record at the facility, in accordance with Permit Condition I.Z.1.c and I.Z.2 of this Permit.

II.G.3. The Permittee shall maintain access to the communications and alarm systems, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.34] and Attachment 6 of this Permit.

II.G.4. The Permittee shall maintain arrangements with state and local authorities, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.37] and Attachment 7 of this Permit. If state or local officials refuse to enter into preparedness and prevention arrangements with the Permittee for a given HWMU, the Permittee must document this refusal in the Operating Record for the excluded unit.

II.H. CONTINGENCY PLAN

The Permittee shall comply with the Contingency Plan matrix provisions of IDAPA 58.01.05.008 [40 CFR Part 264 Subpart D] and as follows:

II.H.1. The Permittee shall comply with the Contingency Plan included in Attachment 7 of this Permit, at a minimum, whenever there is:

II.H.1.a A fire;

II.H.1.b An explosion; or,

II.H.1.c A sudden or non-sudden release of hazardous or mixed waste or hazardous waste constituents to the environment.

II.H.2. The Permittee shall review and amend, as necessary, the Contingency Plan, pursuant to IDAPA 58.01.05.008 and .012 (40 CFR §§ 264.54 and 270.42) and Permit Conditions I.D.4. and I.D.5. of this Permit within fourteen (14) calendar days of the following events:

II.H.2.a. This Permit is revised;

II.H.2.b. The plan fails in an emergency;

II.H.2.c. The Permittee changes the INL design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or releases of mixed waste or mixed waste constituents, or changes the response necessary in an emergency;

II.H.2.d. The list of emergency coordinators changes; or

II.H.2.e. The list of emergency equipment changes.

II.H.3. The Permittee shall ensure that a trained Emergency Coordinator or equivalent is available at all times in case of an emergency, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.55] and Attachment 7 of this Permit.

II.H.4. The Permittee shall submit a copy of the Contingency Plan (and all revisions to the plan) to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.53(b)] and Attachment 7 of this Permit.

II.H.5. The point of contact (POC) for reporting emergencies to the State of Idaho shall be the State of Idaho Communications Center at (800) 632-8000 or (208) 846-7610, and Fax Number (208) 846-7620.

II.H.6. The Permittee shall document in the Facility Operating Record the time, date, and details of any incident that requires implementing the Contingency Plan. Within fifteen (15) days after the incident, the Permittee shall submit a written report on the incident to the Director, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.56(j)] and Attachment 7 of this Permit. Said report shall include, at a minimum, the items in Permit Condition I.T.3.a. of this Permit.

II.I. MANIFEST SYSTEM

The Permittee shall comply with the manifest requirements of IDAPA 58.01.05.008 [40 CFR Part 264 Subpart E].

II.J. RECORD KEEPING AND REPORTING

In addition to the record keeping and reporting requirements specified elsewhere in this Permit, the Permittee shall comply with the following:

II.J.1. The Permittee shall maintain a written Operating Record at INL, in accordance with Permit Condition I.Z.1.c. and I.Z.2. and IDAPA 58.01.05.008 [40 CFR § 264.73(a)], for all records identified in IDAPA 58.01.05.008 [40 CFR § 264.73(b)(1) through (b)(16)].

II.J.2. The Permittee shall, by ~~July 1~~March 1 of each year, submit to the Director a waste minimization certification, pursuant to IDAPA 58.01.05.008 [40 CFR § 264.73(b)(9)], that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the Permittee to be economically practicable; and the proposed method of treatment, storage, or disposal is the most practicable method currently available to the Permittee, which minimizes the present and future threat to human health and the environment. The waste minimization certification shall track the isopropyl alcohol inventory in the Remote Analytical Laboratory to document the ILWMS is no longer the disposal point for this chemical.

II.J.3. The Permittee shall, by March 1 of each even numbered year, submit to the Director a biennial report covering the facility (INL-wide) activities pursuant to IDAPA 58.01.05.008 [40 CFR § 264.75(a) through (j)].

II.J.4. The Permittee shall conduct and complete a source reduction evaluation review and written plan in accordance with the procedures and format provided in the "EPA Waste Minimization Opportunity Assessment Manual" (EPA/625/7-88/003). The review and plan shall be completed in compliance with Permit Condition II.J.2. of this

Permit and include, at a minimum, the following general operating and reporting requirements:

II.J.4.a. The Permittee shall submit to the Director detailed descriptions of any programs the Permittee may have to assist generators of hazardous waste in reducing the volume or quantity and toxicity of wastes they produce.

II.J.4.b. The Permittee shall submit the following information to the Director and shall submit revisions or changes to the Director within thirty (30) calendar days after those revisions or changes:

II.J.4.b.1. A list of generators who received information from the Permittee according to Permit Condition II.J.4.a. of this Permit.

II.J.4.b.2. A list of generators who used the Permittee's contractor services on a Waste Minimization Program.

II.J.4.b.3. A list of generators known to the Permittee who have a Waste Minimization Program in place and any known results (i.e., has there been a reduction in wastes submitted for treatment, recycling, or disposal).

II.J.5. A waste minimization review and plan shall be submitted to the Director by March 31, 2007 and every four (4) years thereafter, in accordance with Permit Condition II.J.4. of this Permit. The review and plan shall address the entire INL, unless otherwise approved by the DEQ.

II.J.6. All reports, notifications, applications, or other materials (required to be submitted to the Director) shall be submitted in accordance with Permit Condition I.W. of this Permit.

II.K. CLOSURE

II.K.1. The Permittee shall meet the general Closure Performance Standard, as specified in IDAPA 58.01.05.008 [40 CFR § 264.111] and Attachment 8 of this permit, as modified here, during any partial and final closure of the ILWMS.

II.K.1.a. Clean closure of each HWMU shall be demonstrated by no detectable hazardous waste or underlying hazardous constituents in samples of the final rinse solution for both the tank and associated containment system. Revised action levels may be developed prior to closure and implemented through the appropriate class permit modification.

II.K.1.b. The pH of the final rinse water, before and after use, shall not change more than one-half (0.5) pH. A pH variance by more than one-half unit suggests hazardous

waste or hazardous waste constituents are present, thus clean closure is not demonstrated.

II.K.2. The integrity of waste lines that will not be removed as a part of closure shall be determined by pressure testing, or other methods pre-approved by the Director, prior to completion of decontamination activities.

II.K.2.a. If a line fails a pressure test, or other integrity test method pre-approved by the Director, the Permittee shall determine the cause of the failure (e.g. open connection, loss of line integrity, malfunctioning pressure relief valve, etc.).

II.K.2.b. If a line fails a pressure test, or other integrity test method pre-approved by the Director, the Permittee shall determine if there has been a release to the environment.

II.K.2.b.1. If there has been a release to the environment, the Permittee shall characterize the nature and extent of the release.

II.K.2.b.2. If the release cannot be remediated as part of the general closure activity, the release may be passed to the FFA/CO for corrective action, with HWMA as an applicable requirement.

II.K.3. Closure of HWMA/RCRA lines shall be verified as empty and closed by blind flanging. If a line is to remain after closure, both ends shall be blind flanged. In the case that one end of the pipe cannot be reached, the pipe shall be blind flanged at the end nearest the source. In addition to this, all valves leading to the blind flange shall be locked closed, and the valves tagged out.

II.K.4. During all closure activities, atmospheric releases of hazardous waste and hazardous waste constituents shall be minimized by venting any off-gases through the appropriate ~~INTEC APCS~~ off-gas system. If gases are vented directly to the atmosphere, the Permittee shall obtain any necessary air permits or exemptions.

II.K.5. The Permittee shall perform a hazardous waste determination on all solid waste generated during closure including, but not limited to, contaminated process equipment, building components, tanks and ancillary equipment, scrap metal, soils, etc., in accordance with IDAPA 58.01.05.006 [40 CFR § 262.11] and Attachment 2 of this Permit.

II.K.6. The following corrections are hereby made to the ILWMS Closure Plan, Attachment 8 of this Permit:

II.K.6.a. Locking valves closed or tagging out valves is not sufficient to secure a system to prevent reintroduction of waste to a closed HWMU. DEQ will not consider locking or

tagging out a valve unless the integrity of the valve is demonstrated, and the valve is then added to a weekly inspection procedure through a modification to this Permit.

II.K.6.b. References in the plan to the closure requirements for ~~containers,~~ surface impoundments, waste piles, land treatment, incinerators, and containment buildings are not applicable and are hereby deleted from the plan.

II.K.6.c. The Permittee shall conduct sampling and analysis, performed in accordance with Permit Condition I.O., to verify that the Clean Closure Performance Standard has been achieved.

II.K.7. The Permittee shall amend the Closure Plans, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.112(c)] and Attachment 8 of this Permit, prior to partial or final closure and whenever necessary.

II.L. EQUIVALENT MATERIALS/INFORMATION

II.L.1. If certain equipment, materials, and administrative information (such as names, phone numbers, addresses) are specified in this Permit, the Permittee is hereby authorized to use equivalent or superior items. Use of such equivalent or superior items shall not be considered a modification of this Permit, but the Permittee shall place in the Operating Record (prior to the institution of such revision) the revision, accompanied by a narrative explanation, and the date the revision became effective. The Director may judge the soundness of the revision during inspections of the facility and take appropriate action. The format of tables, forms, and figures are not subject to the requirements of this Permit and may be revised at the Permittee's discretion.

II.L.2. If the Department determines that the substitution was not equivalent to the original, it will notify the Permittee that the Permittee's claim of equivalency has been denied, the reasons for the denial, and that the original material or equipment must be used. If the product substitution is denied, the Permittee shall comply with the original approved product specification, find an acceptable substitution, or apply for a Permit Modification, in accordance with Permit Condition I.D.4.

II.M. AIR EMISSION STANDARDS FOR PROCESS VENTS

II.M.1. Applicability

II.M.1.a. The Process Equipment Waste Evaporator (PEWE) off-gas is processed through both the Building 604 Vessel Off-Gas System and the Process Atmospheric Protection System (APS) in Building 649, prior to discharge to the INTEC main stack. The PEWE vent does not meet the definition of a process vent at IDAPA 58.01.05.008 [40 CFR § 264.1031]. Therefore, the air emission standards for process vents do not apply."

II.M.1.b. The Evaporator Tank System (ETS) off-gas is processed through both the Building 659 Process Off-Gas System and the Atmospheric Protection System (APS) in Building 649, prior to discharge to the INTEC main stack. The ETS vent does not meet the definition of a process vent at IDAPA 58.01.05.008 [40 CFR § 264.1031]. Therefore, the air emission standards for process vents do not apply.

II.M.1.c. The Liquid Effluent Treatment and Disposal Facility (LET&D) off-gas is discharged to the INTEC main stack through a process vent, therefore, IDAPA 58.01.05.008 [40 CFR § 264.1031] is applicable.

II.M.1.d. The Integrated Waste Treatment Unit (IWTU) process does not involve distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping. The IWTU vent does not meet the definition of a process vent at IDAPA 58.01.05.008 [40 CFR § 264.1031]. Therefore, the air emission standards for process vents do not apply.

II.M.2. The Permittee shall determine the applicability of IDAPA 58.01.05.008 [40 CFR Part 264 Subpart AA] by documenting the total organic concentration in all feed sources to the LET&D.

II.M.2.a. If the LET&D manages only mixed hazardous waste with total organic concentrations less than 10 ppmw, then IDAPA 58.01.05.008 [40 CFR Part 264 Subpart AA] does not apply.

II.M.2.b. If the LET&D manages mixed hazardous waste with total organic concentrations greater than or equal to 10 ppmw, then IDAPA 58.01.05.008 [40 CFR Part 264 Subpart AA] applies.

II.M.3. The Permittee shall document compliance with the IDAPA 58.01.05.008 [40 CFR Part 264 Subpart AA] standards by:

II.M.3.a. Reducing the input total organic concentrations to the LET&D to less than 10 ppmw for all wastes processed; or

II.M.3.b. Reducing total organic emissions from all affected process vents at INL below 1.4 kg/h (3.0 lb/h) and 2.8 Mg/yr (3.1 tons/yr); or

II.M.3.c. Reducing, by means of a control device, total organic emissions from all affected process vents at INL by 95 weight percent.

II.M.4. The Permittee shall record the following information in the Facility Operating Record, in accordance with IDAPA 05.01.008 [40 CFR § 264.1035]:

II.M.4.a. Up-to-date documentation of the applicability and/or compliance with the process vent standards in Permit Conditions II.M.3., including:

II.M.4.a.1. Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility [i.e., the total emissions for all affected vents at the facility, and the approximate location within the facility of each affected unit (e.g., identify the hazardous waste management units on a facility plot plan)].

II.M.4.a.2. Information and data supporting determinations of vent emissions and emission reductions achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions must be made using operating parameter values (e.g., temperatures, flow rates, or vent stream organic compounds and concentrations) that represent the conditions that result in maximum organic emissions, such as when the waste management unit is operating at the highest load or capacity level reasonably expected to occur. If any action is taken (e.g., managing a waste of different composition or increasing operating hours of affected waste management units) that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.

II.M.5. Records of the monitoring, operating, and inspection information, required by Permit Condition II.M.4., shall be maintained in accordance with Permit Conditions I.Z.1.c. and I.Z.2.

II.M.6. Information and data used to determine whether any other INL process vents are subject to the requirements of IDAPA 58.01.05.008 [40 CFR Part 264 Subpart AA] shall be kept in the Operating Record.

II.M.6.a. The Operating Record shall be updated within thirty (30) days of a change in INL operations that potentially involve regulated process vents.

II.M.6.b. INL process vent data shall be reviewed at least annually for compliance with the IDAPA 58.01.05.008 [40 CFR §§ 264.1030 and .1035].

II.M.7. The Permittee shall modify this permit as necessary to ensure compliance with Permit Condition II.M.3. whenever:

II.M.7.a. The Permittee identifies additional hazardous waste process vents; or

II.M.7.b. The Permittee determines that the LET&D is subject to the requirements of IDAPA 58.01.05.008 [40 CFR Part 264 Subpart AA].

II.N. FINANCIAL ASSURANCE FOR FACILITY CLOSURE

The Permittee (DOE, as a federal government unit, and ~~CWI, Inc~~the DOE-designated contractor, as co-Permittee) is exempt from the financial assurance requirements, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.140(c)].

II.O. LIABILITY INSURANCE FOR SUDDEN ACCIDENTAL OCCURRENCES

The Permittee (DOE, as a federal government unit, and the DOE-designated contractor~~CWI, Inc.~~, as co-Permittee) is exempt from the liability coverage for sudden accidental occurrence requirements, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.140(c)].

II.P. COMPLIANCE SCHEDULE

II.P.1. The Permittee shall comply with the applicable Secondary Containment requirements for ancillary equipment at IDAPA 58.01.05.008 [40 CFR § 264.193(f)] and the DEQ-approved designs and specifications. The following pipes will be upgraded to provide compatible Secondary Containment:

II.P.1.a. The jet transfer line from WM-101 to WM-100, located between the VES-WM-100 Vault and the VES-WM-101/102 Vault, with a penetration number of 3” PWM-1018Y.

II.P.1.b. The jet transfer line from WM-100 to WM-102, located between the VES-WM-100 Vault and the VES-WM-101/102 Vault, with a penetration number of 3” PWM-10024Y.

II.P.1.c. The overfill line between WM-100/WM-101, located between the VES-WM-100 Vault and the VES-WM-101/102 Vault, with a penetration number of 3” PWM-20015Y.

II.P.1.d. The transfer line from VES-WL-109 to VES-WL-161, located in the wall between EVAP-WL-161 Cell and the Condensate Collection Cell, with a penetration number of 1 1/2” PWL-2091C.

II.P.1.e. The Evaporators discharge line to VES-WL-101 tank, located in the wall between the EVAP-WL-161 Cell and the VES-WL-101 vault, with a penetration number of 4” PWL-1133C.

II.P.1.f. The discharge line from the collection tanks to the LET&D Process, located at the wall between the CPP-604 Condensate Collection Cell and the Pipe Corridor and between the Operating Corridor and CPP-605, with a penetration number of 2” PWL-2068C.

II.P.2. The schedule set forth in Permit Condition II.P.2.a. of this Permit sets forth interim requirements and projected completion dates for their achievement, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.33(a)(2)] and Attachment 1, as follows:

II.P.2.a. The transfer lines listed in Permit Condition II.P.1 will be upgraded or rerouted in accordance with the following schedule:

II.P.2.a.1. Title design complete by September 30, 2005;

II.P.2.a.2. Work package development complete by March 31, 2006; and

II.P.2.a.3. Professional Engineering Certification of the upgrades/rerouting of identified lines submitted to DEQ on or before September 30, 2006 as part of a Class 1 (prior DEQ approval required) Permit Modification Request to close the Secondary Containment Compliance Schedule item.

II.P.3. The Permittee shall continue to evaluate methods to conduct inspections of the ILWMS tanks that can not presently be inspected using standard techniques.

II.P.3.a. Inspection techniques that are to be adopted shall be incorporated into the permit through the procedures of Permit Condition I.D.

II.P.3.b. The Permittee shall record a brief description and justification for adopting/rejecting each inspection method evaluated in the facility operating record.

II.P.3.c. The Permittee shall summarize the inspection methods evaluated in the semi-annual non-compliance report.

II.P.4 The Permittee shall upgrade the West-Side Waste Hold Up tanks according to the following schedule:

II.P.4.a. On or before October 1, 2007, commence installation of the equipment upgrades;

II.P.4.b. Submit a semiannual progress report (may be submitted in conjunction with the Permit Condition I.U. Report); and,

II.P.4.c. On or before October 1, 2009, complete upgrades and submit certified engineering drawings to DEQ in accordance with Permit Conditions I.W. and I.Y.

II.Q. RISK ANALYSIS VALIDATION

~~II.Q.1. The Permittee used the *Screening Level Risk Assessment for the New Waste Calcining Facility* (INEEL, May 1999) to demonstrate the protectiveness of the ILWMS. The Permittee shall validate the protectiveness documentation (risk~~

~~analysis) by reporting the results of emissions sampling for all Subpart X units subject to this Permit, within three (3) years of the effective date of this Permit.~~

~~II.Q.1.a. The emissions from the Subpart X units identified in Module V of this Permit shall be sampled (at a minimum) for the following:~~

- ~~RCRA metals, including Hg;~~
- ~~Method 0040;~~
- ~~Volatile Organic Compounds;~~
- ~~Semi-Volatile Organic Compounds;~~
- ~~Halogen species (Cl, F, etc.); and~~
- ~~Other contaminants of potential concern expected to be present.~~

~~II.Q.1.b. Emissions testing shall be conducted in accordance with the following hierarchy:~~

- ~~SW-846;~~
- ~~40 CFR 60 Appendix A;~~
- ~~ASTM D1066 Standard Practice for Sampling Steam; or~~
- ~~A DEQ-approved alternative method.~~

~~II.Q.1.c. An emissions sampling report shall be submitted to DEQ within 120 days of the sampling event. The report shall include, but not be limited to the following:~~

- ~~Field Notes collected during sampling;~~
- ~~Raw analytical data;~~
- ~~Quality Assurance/Quality Control data (may be submitted electronically); and~~
- ~~Summary tables.~~

~~II.Q.1.d. Interpretation of the results of emissions sampling shall be submitted to DEQ within 90 days of transmittal of the emissions sampling report required by II.Q.1.c.~~

II.Q.~~2~~1. The risk analysis ~~described in Permit Condition II.Q.1.~~prepared to demonstrate the protectiveness of the ILWMS shall be re-evaluated whenever a compound of potential concern (COPC) is added to the emission inventory, as indicated by offgas measurements of a new COPC that confirm the compound is present in the offgas, or the emission rate of a known COPC exceeds the predicted emissions estimate by a factor of two (2) or more.

II.Q.~~2~~1.a. If the calculated total risk from ILWMS exceeds 5.0E-6 risk for carcinogens and/or 0.5 hazard quotient for noncarcinogens, the risk analysis shall be revised and submitted to the Director within ninety (90) days.

II.Q.~~2~~1.b. If the calculated total risk from ILWMS does not exceed 5.0E-6 risk for carcinogens and/or 0.5 hazard quotient for noncarcinogens, the risk re-evaluation shall be noted in the operating record.

MODULE III
STORAGE IN TANKS

III.A. TANK STORAGE

III.A.1. Deep Tanks

Table 2

UNIT NAME:	**WG-Cell, Deep Tanks VES-WG-100 and VES-WG-101**		**BUILDING NO.**	CPP-601
NUMBER OF UNITS:	**2**	**PROCESS CODES:**	**S02, T01**	
DESCRIPTION:	**Size**: Each tank is cylindrical and horizontal-oriented with domed ends. The dimensions of the tanks are an outside diameter of 9' and a length of 10' with a tangent-to-tangent length of 8' 6". The tank construction material is Type 347 Stainless Steel (SS). **Secondary Containment**: The Deep Tanks are located in a vault 57' 6" below grade made of reinforced concrete, with the floors and lower 3' of the walls lined with SS. The inner dimensions of the vault are 15' x 38' 6" x 21' 6". The cell drains to an SS lined sump. Upon high level alarm, liquid in the sump is steam jetted to VES-WG-100. If the tank system or secondary containment becomes unfit for use, the permittee must comply with permit conditions III.C.6. and III.C.7.			
CAPACITY:	**~4,500 Gallons Per Tank**			
NOTES:	**Receives**: Inputs come from floor sumps, process samplers, process equipment drains, decontamination activities, and laboratory analyses in CPP-601, -602, -627, -640, -666, and the Remote Analytical Lab (RAL) in CPP-684. Waste is gravity-fed to the Deep Tanks, and jetted between tanks in case of overflow. Volatile organics disposal to the Deep Tanks is limited to the waste associated with the laboratory analysis of no more than 60 radioactive high chloride samples, resulting in disposal of less than 1 L/yr of acetone. **Output**: The waste is pumped to VES-WL-132 for PEWE treatment, or to the TFF for storage. A leak or overflow that results in waste in the sump is jetted to VES-WG-101 or VES-WH-100.			

UNIT NAME:	**WH-Cell, Deep Tanks VES-WH-100 and VES-WH-101**		**BUILDING NO.**	**CPP-601**
NUMBER OF UNITS:	**2**	**PROCESS CODES:**	**S02, T01**	
DESCRIPTION:	**Size**: Each tank is cylindrical and horizontal-oriented with domed ends. The dimensions of the tanks are an outside diameter of 9' and a length of 10' with a tangent-to-tangent length of 8' 6". The tank construction material is Type 347 SS. **Secondary Containment**: The Deep Tanks are located in a vault 57' 6" below grade made of reinforced concrete, with the floors and lower 3' of the walls lined with SS. The inner dimensions of the vault are 15' x 38' 6" x 21' 6". The cell drains to a SS lined sump. Upon high level alarm, liquid in the sump is steam jetted to VES-WH-100. If the tank system or secondary containment becomes unfit for use, the permittee must comply with permit conditions III.C.6. and III.C.7.			
CAPACITY:	**~4,500 Gallons Per Tank**			
NOTES:	**Receives**: Inputs come from floor sumps, process samplers, process equipment drains, decontamination activities, and laboratory analyses in CPP-601, -602, -627, -640, -666, and the Remote Analytical Lab (RAL) in CPP-684. Waste is gravity-fed to the Deep Tanks, and jetted between tanks in case of overflow. Volatile organics disposal to the Deep Tanks is limited to the waste associated with the laboratory analysis of no more than 60 radioactive high chloride samples, resulting in disposal of less than 1 L/yr of acetone. **Output**: The waste is pumped to VES-WL-132 for PEWE treatment, or to the TFF for storage. A leak or overflow that results in waste in the sump is jetted to VES-WG-101 or VES-WH-100.			

III.A.2. PEWE STORAGE TANKS

UNIT NAME:	**Evaporator Feed Sediment Tank, VES-WL-132**		**BUILDING NO.**	**CPP-604**
NUMBER OF UNITS:	**1**	**PROCESS CODES:**	**S02, T01**	
DESCRIPTION:	**Size:** The tank is cylindrical and vertical-oriented, with domed ends. The dimensions of the tank are an outside diameter of 9' and a length of 11', with a tangent-to-tangent length of 7' 9". The tank construction material is Nitronic 50 SS. **Secondary Containment:** The tank is located in an underground vault constructed of reinforced concrete, with floors and lower 2' 6" of the walls lined with SS. The vault has the dimensions of 17' x 16' 6" x 13' 8". The cell floor slopes to a 3" drain line that leads to the VES-WL-133 vault sump. Upon high alarm, liquid in the sump is jetted to the inlet line to VES-WL-132.			
CAPACITY:	**~4,700 Gallons**			
NOTES:	**Receives:** Inputs come from CPP-601 Deep Tanks, CPP-641 Westside Waste Holdup Tanks, New Waste Calcining Facility Tanks, VES-WL-101/111, VES-WM-100/101/102, snow melt or other liquids from TFF sumps, basin water from CPP-666 or CPP-603, and waste from other INL facilities via the truck unloading bay at CPP-1619. Waste is jetted or pumped into the tank. **Output:** The waste is normally drained by gravity to VES-WL-133.			

UNIT NAME:	**Evaporator Feed Collection Tank, VES-WL-133**		**BUILDING NO.**	**CPP-604**
NUMBER OF UNITS:	**1**	**PROCESS CODES:**	**S02, T01**	
DESCRIPTION:	**Size:** The tank is cylindrical and horizontal-oriented with domed ends. The dimensions of the tank are an outside diameter of 10', and a length of 34' with a tangent-to-tangent length of 30'. The tank construction material is Nitronic 50 SS. **Secondary Containment:** The tank is located in an underground vault constructed of reinforced concrete, with floors and lower 5' of the walls lined with SS. The vault has the dimensions of 42' x 16' 6" x 17'. The cell drains to a sump shared with the VES-WL-132 vault, with the floor sloping to a sump along the west wall. Upon high alarm, liquid in the sump is jetted to the inlet line to VES-WL-132.			
CAPACITY:	**~19,000 Gallons**			
NOTES:	**Receives:** Inputs come from VES-WL-132 and all the same sources as VES-WL-132 and recycled condensate from WL-106, WL-107 and WL-163 via gravity drain lines. Liquid that collects in the PWL system tanks and sumps is transferred via steam jets. Waste is gravity-fed into the tank. **Outputs:** Waste is normally pumped to VES-WL-109 or EVAP-WL-129.			

UNIT NAME:	**Surge Tank, VES-WL-102**		**BUILDING NO.**	**CPP-604**
NUMBER OF UNITS:	**1**	**PROCESS CODES:**	**S02, T01**	
DESCRIPTION:	**Size:** The tank is a cylindrical and horizontal-oriented tank with domed ends. The dimensions of the tank are an outside diameter of 10', and a length of 33', with a tangent-to-tangent length of 30'. The tank construction material is Type 347 SS. **Secondary Containment:** The tank is located in a vault constructed of reinforced concrete, with floors and the lower 3' of the walls lined with Hypalon. The vault has the dimensions of 30' 6" x 43' x 16'. The cell drains to an SS-lined floor sump in the center of the cell. Upon high alarm, the liquid in the sump is jetted to VES-WL-150 and then to VES-WL-132.			
CAPACITY:	**~18,400 Gallons**			
NOTES:	**Receives:** Inputs are normally pumped from VES-WL-133. **Outputs:** Waste is normally pumped to VES-WL-133.			

UNIT NAME:	**Evaporator Head Tank, VES-WL-109**		**BUILDING NO.**	**CPP-604**
NUMBER OF UNITS:	**1**	**PROCESS CODE:**	**S02**	
DESCRIPTION:	**Size:** The tank is cylindrical and vertical-oriented, with domed ends. The dimensions of the tank are an outside diameter of 3' and a length of 7' 2", with a tangent-to-tangent length of 5'. The tank construction material is Type 347 SS. **Secondary Containment:** The tank is located in a cell constructed of reinforced concrete, with the floors and lower 3' of the walls lined with SS. The cell has the dimensions of 22' x 18' x 34'. The cell drains to an SS-lined sump (10" x 1') in the NW corner of the cell. Upon high alarm, liquid in the sump is jetted as part of the PWL Collection System to VES-WL-133.			
CAPACITY:	**~270 Gallons**			
NOTES:	**Receives:** Inputs come from VES-WL-133 or VES-WL-102. Waste is jetted or pumped into the tank. **Outputs:** The waste is gravity-fed into EVAP-WL-161, and the overflow returns to VES-WL-133 or VES-WL-102.			

UNIT NAME:	**Evaporator Flash Column, VES-WL-129**		**BUILDING NO.**	**CPP-604**
NUMBER OF UNITS:	**1**	**PROCESS CODES:**	**S02, X99**	
DESCRIPTION:	**Size:** The tank is cylindrical and vertical-oriented, with domed ends. The dimensions of the tank are an outside diameter of 3', and a length of 19 '6" with a tangent-to-tangent length of 14' 9". The tank construction material is Nitronic 50 SS. **Secondary Containment:** The unit is located in a cell constructed of reinforced concrete, with the floors and walls lined with SS. The vault has the dimensions of 14' x 21' 4" (including the access area) x 34' (the access area is only 8' high). The access area floor and lower 1' of the walls are lined with SS. The cell drains to a sump, with the floor sloping to a 2-inch drain that leads to the feed pump cell sump. The sump has dimensions of 1' 6" x 1' 6" x 2' 6". Upon high alarm, the sump is jetted to VES-WL-133.			
CAPACITY:	**~1000 Gallons**			
NOTES:	**Receives:** Inputs come from VES-WL-133. Waste is pumped into the column. **Outputs:** The overheads are collected in VES-WL-131. The bottoms are gravity fed to VES-WL-133, VES-WL-101, or VES-WL-111.			

UNIT NAME:	**Process Condensate Surge Tank, VES-WL-134**		**BUILDING NO.**	**CPP-604**
NUMBER OF UNITS:	**1**	**PROCESS CODE:**	**S02**	
DESCRIPTION:	**Size:** The tank is cylindrical and vertical-oriented, with domed ends. The dimensions of the tank are an outside diameter of 3' 6", and a length of 8' 9", with a tangent-to-tangent length of 7'. The tank construction is Type 304L SS. **Secondary Containment:** The tank is located in a cell constructed of reinforced concrete, with the floors and the lower 1' of the walls lined with SS. A barrier that is 6" high is located in front of the condensate collection cell door to prevent leakage to the access corridor. The cell has the dimensions of 46' x 21' x 35'6". The containment area drains to either SU-WL-145 or SU-WL-146. Upon high alarm, liquid in the sump is jetted as part of the PWL Collection System to VES-WL-133.			
CAPACITY:	**~500 Gallons**			
NOTES:	**Receives:** Inputs come from HE-WL-308 (acidic condensate). Waste is gravity fed into the tank. **Outputs:** In series operation, this tank provides feed for EVAP-WL-161. The waste is pumped to VES-WL-161.			

UNIT NAME:	**Evaporator Flash Column, VES-WL-161**		**BUILDING NO.**	**CPP-604**
NUMBER OF UNITS:	**1**	**PROCESS CODES:**	**S02, X99**	
DESCRIPTION:	**Size:** The column is vertical and cylindrical, with domed ends. The dimensions of the tank are an outside diameter of 3', and a length of 19' 6", with a tangent-to-tangent length of 14' 9". The tank construction material is Nitronic 50 SS. **Secondary Containment:** The unit is located in a cell constructed of reinforced concrete, with the floors and lower 3' of the walls lined with SS. The cell has the dimensions of 22' x 18' x 34'. The cell drains to an SS-lined sump (10" x 1') in the NW corner of the cell. Upon high alarm, liquid in the sump is jetted as part of the PWL Collection System to VES-WL-133.			
CAPACITY:	**~1,000 Gallons**			
NOTES:	**Receives:** Inputs come from VES-WL-109 or VES-WL-134. Waste is gravity fed into the column. **Outputs:** The overheads are collected in VES-WL-131. The bottoms are gravity fed to VES-WL-133, VES-WL-101, or VES-WL-111.			

UNIT NAME:	**Process Condensate Surge Tank, VES-WL-131**		**BUILDING NO.**	**CPP-604**
NUMBER OF UNITS:	**1**	**PROCESS CODE:**	**S02**	
DESCRIPTION:	**Size:** The tank is cylindrical and horizontal-oriented, with domed ends. The dimensions of the tank are an outside diameter of 2', and a length of 2' 10" with a tangent-to-tangent length of 2' 9". The tank construction material is Type 304L SS. **Secondary Containment:** The tank is located in a cell constructed of reinforced concrete, with the floor and lower 1' of the walls lined with SS. The barrier is 6" high and is located in front of the condensate collection cell door to prevent leakage to the access corridor. The cell has the dimensions of 46' x 21' x 35' 6". The cell drains to either SU-WL-145 or SU-WL-146. Upon high alarm, liquid in the sump is jetted as part of the PWL Collection System to VES-WL-133.			
CAPACITY:	**~66 Gallons**			
NOTES:	**Receives:** Inputs come from HE-WL-301 or HE-WL-308 (acidic condensate). Waste is gravity-fed into the tank. **Outputs:** The waste is pumped to VES-WL-106, VES-WL-107, and VES-WL-163.			

UNIT NAME:	**Process Off-gas Condensate Knock-Out Pot, VES-WL-108**		**BUILDING NO.**	**CPP-604**
NUMBER OF UNITS:	**1**	**PROCESS CODE:**	**S02**	
DESCRIPTION:	**Size:** The tank is cylindrical and vertical-oriented, with domed ends. The dimensions of the tank are an outside diameter of 2', and a length of 5' 8", with a tangent-to-tangent length of 2' 8". The tank construction material is Type 347 SS. **Secondary Containment:** The tank is located in the same cell as VES-WL-106, VES-WL-107, and VES-WL-163.			
CAPACITY:	**~98 Gallons**			
NOTES:	**Receives:** Inputs are the condensed liquid from the evaporator VOG before the off-gas is released to the plant VOG system. **Outputs:** The waste is gravity-fed to VES-WL-133.			

UNIT NAME:	**Bottoms Collection Tank, VES-WL-111**		**BUILDING NO.**	**CPP-604**
NUMBER OF UNITS:	**1**	**PROCESS CODES:**	**S02, T01**	
DESCRIPTION:	**Size:** The tank is rectangular and horizontal-oriented. The dimensions of the tank are 12' long, 4' 8" wide, and 3' 6" high. The tank construction material is Type 304L SS. **Secondary Containment:** The tank is located in a cell constructed of reinforced concrete, with the floors and lower 3' of the walls lined with SS. The cell has the dimensions of 22' x 18' x 34'. The cell drains to a SS-lined sump (10" x 1') in the NW corner of the cell. Upon high alarm, liquid in the sump is jetted as part of the PWL Collection System to VES-WL-133.			
CAPACITY:	**~1,500 Gallons**			
NOTES:	**Receives:** Inputs come from VES-WL-129 and VES-WL-161 (concentrated acidic bottoms). Waste is gravity-fed into the tank. **Outputs:** The waste is normally jetted to the CPP-604 TFT, the TFF, VES-WL-101 or the ETS.			

UNIT NAME:	**Bottoms Collection Tank, VES-WL-101**		**BUILDING NO.**	**CPP-604**
NUMBER OF UNITS:	**1**	**PROCESS CODES:**	**S02, T01**	
DESCRIPTION:	**Size:** The tank is cylindrical and horizontal-oriented, with domed ends. The dimensions of the tank are an outside diameter of 10', and a length of 33', with a tangent-to-tangent length of 30'. The tank construction material is Type 347 SS. **Secondary Containment:** The tank is located in a vault constructed of reinforced concrete, with floors and lower 3' of walls lined with Hypalon. The vault has the dimensions of 30' 6" x 43' x 16'. The cell drains to a SS-lined floor sump in the center of the cell. Upon high alarm, the sump is jetted to VES-WL-150 and then to VES-WL-132.			
CAPACITY:	**~18,400 Gallons**			
NOTES:	**Receives:** Inputs come from VES-WL-129 and VES-WL-161 (concentrated acidic bottoms). The waste is gravity-fed into the tank. **Outputs:** The waste is normally jetted to the CPP-604 TFT, the TFF, or the ETS.			

UNIT NAME:	**Westside Waste Holdup Tank, VES-WL-103**		**BUILDING NO.**	**CPP-641**
NUMBER OF UNITS:	**1**	**PROCESS CODES:**	**S02**	
DESCRIPTION:	*** The tanks have been emptied to the maximum extent allowed by the transfer pumps. No waste will be transferred to these tanks until the ancillary equipment and piping is upgraded to handle the types of wastes it will receive.** **Size:** The tank is cylindrical and horizontal-oriented, with domed ends. The dimensions of the tank are an outside diameter of 8', and a length of 14', with a tangent-to-tangent length of 12' 6". The tank construction material is Type 304L SS. **Secondary Containment:** The tank is located in a vault constructed of concrete, with floors and lower 4' 9" of the walls lined with Hypalon®. The upper portions of the walls and the ceiling are coated with an epoxy coating that is compatible with the waste being stored. The vault has the dimensions of 18' x 12' 2" x 12' 6". The vault drains to a stainless-steel-lined sump. Upon high alarm, the sump is jetted to VES-WL-103. If the tank system or secondary containment becomes unfit for use, the permittee must comply with permit conditions III.C.6. and III.C.7.			
CAPACITY:	~5,000 **Gallons**			
NOTES:	**Receives:** The tank receives waste from CPP-666, CPP-684, CPP-602, and the CPP-1619 Truck Unloading Station. Waste is gravity drained or pumped into the tank. **Outputs:** Waste is normally pumped to VES-WL-104.			

UNIT NAME:	**Westside Waste Holdup Tanks, VES-WL-104 and VES-WL-105**		**BUILDING NO.**	**CPP-641**
NUMBER OF UNITS:	**2**	**PROCESS CODES:**	**S02**	
DESCRIPTION:	*** The tanks have been emptied to the maximum extent allowed by the transfer pumps. No waste will be transferred to these tanks until the ancillary equipment and piping is upgraded to handle the types of wastes it will receive.** **Size:** The tanks are cylindrical and horizontal-oriented, with domed ends. The dimensions of the tanks are an outside diameter of 8' and a length of 14' with a tangent-to-tangent length of 12' 6". The tank construction material is Type 304L SS. **Secondary Containment:** These tanks share a vault constructed of concrete, with the floors and lower 2' 6" of the walls lined with Hypalon®. The upper portions of the walls and the ceiling are coated with an epoxy coating that is compatible with the waste being stored. The vault has the dimensions of 18' x 22' x 12' 6". The vault drains to a stainless-steel-lined sump. Upon high alarm, liquid in the sump is jetted to VES-WL-104.			
CAPACITY:	5,000 Gallons Each			
NOTES:	**Receives:** The tanks receive wastes from CPP-666, CPP-684, CPP-602 and the CPP-1619 Truck Unloading Station. Waste is gravity drained or pumped into the tanks. **Outputs:** Waste is normally pumped to the PEWE, the TFF, or the CPP-604 TFT.			

UNIT NAME:	**Tank Farm Tank, VES-WM-100**		**BUILDING NO.**	**CPP-604**
NUMBER OF UNITS:	**1**	**PROCESS CODES:**	**S02, T01**	
DESCRIPTION:	**Size:** The tank is cylindrical and horizontal-oriented with domed ends. The dimensions of the tank are an outside diameter of 10' and a length of 33', with a tangent-to-tangent length of 30'. The tank construction material is Type 347 SS. **Secondary Containment:** This tank is located in a vault constructed of reinforced concrete, with the floor and lower 3' 6" of the walls lined with SS. The vault has the dimensions of 17' x 43' x 16'. The floor of the vault slopes to a sump with the dimensions of 2' x 2' x 4' along east wall of the vault. Upon high alarm, the liquid in the sump is jetted to VES-WL-132.			
CAPACITY:	**~18,400 Gallons**			
NOTES:	**Receives:** Inputs come from CPP-659, the Deep Tanks, VES-WL-101, 111, and fuel storage basins. Waste is gravity-fed, jetted, or pumped into the tank. **Outputs:** Waste is normally jetted to VES-WL-132, the ETS, or the TFF.			

UNIT NAME:	**Tank Farm Tanks, VES-WM-101 and VES-WM-102**		**BUILDING NO.**	**CPP-604**
NUMBER OF UNITS:	**2**	**PROCESS CODES:**	**S02, T01**	
DESCRIPTION:	**Size:** The tanks are cylindrical and horizontal-oriented with domed ends. The dimensions of the tanks are an outside diameter of 10' and a length of 33', with a tangent-to-tangent length of 30'. The tank construction material is Type 347 SS. **Secondary Containment:** The tanks are located in a vault constructed of reinforced concrete, with the floor and the lower 3' 6" of the walls lined with SS. The vault has the dimensions of 30' 6"' x 43' x 16'. The vault floor slopes to a sump with the dimensions of 2' x 2' x 4' in the center of the vault. Upon high alarm, the liquid in the sump is jetted to VES-WL-132.			
CAPACITY:	**~18,400 Gallons Each**			
NOTES:	**Receives:** Inputs come from VES-WM-100. The waste is gravity-fed or jetted into the tanks. **Outputs:** Waste is jetted to VES-WL-132, VES-WM-100, VES-WM-101, the ETS, or the TFF.			

UNIT NAME:	**Process Waste Liquid System: VES-WL-135, VES-WL-136, VES-WL-139, VES-WL-142**		**BUILDING #**	**CPP-604**
NUMBER OF UNITS:	**4**	**PROCESS CODE:**	**S02**	
DESCRIPTION:	**Size:** Each tank is cylindrical and vertical-oriented with domed ends. The dimensions of the tanks are an outside diameter of 1' 6" and a length of 10", with a tangent-to-tangent length of 8". The tanks' construction material is Type 304L SS. **Secondary Containment:** The tanks are located in sumps constructed of reinforced concrete lined with SS. The sump has the dimensions of 2' x 2' x 1' 8". VES-WL-135 is located in Valve Box D5, which has measurements of 6' x 8' x 11' 9". Upon high alarm, all are jetted to a common header and transferred to VES-WL-133.			
CAPACITY:	**~10 Gallons Each**			
NOTES:	**Receives:** Off-gas condensate from CPP-604, CPP-649, and associated valve boxes. Waste is gravity-fed into the tanks. **Outputs:** Waste is jetted to VES-WL-133.			

UNIT NAME:	**Process Waste Liquid System: VES-WL-137, VES-WL-138, VES-WL-144**		**BUILDING #**	**CPP-604**
NUMBER OF UNITS:	**3**	**PROCESS CODE:**	**S02**	
DESCRIPTION:	**Size:** Each tank is cylindrical and vertical-oriented with domed ends. The dimensions of the tanks are an outside diameter of 2' and a length of 13", with a tangent-to-tangent length of 1'. The construction material of each tank is Type 304L SS. **Secondary Containment:** The tanks are located in sumps constructed of reinforced concrete and lined with SS. The sumps have the dimensions of 2' 6" x 2' 6" x 2'. Upon high alarm liquid from the sumps is jetted to a common header and transferred to VES-WL-133.			
CAPACITY:	**~25 Gallons E**ach			
NOTES:	**Receives:** Inputs are off-gas condensate from CPP-604, CPP-649, and associated valve boxes. Waste is gravity-fed into the tanks. **Outputs:** Waste is jetted to VES-WL-133.			

UNIT NAME:	Process Waste Liquid System: VES-WL-150		BUILDING #	CPP-604
NUMBER OF UNITS:	1	PROCESS CODE:	S02	
DESCRIPTION:	**Size:** The tank is cylindrical and vertical-oriented with domed ends. The dimensions of the tank are a diameter of 2' and a length of 2' 3", with a tangent-to-tangent length of 2'. The tank construction material is Type 304L SS. **Secondary Containment:** The tank is located in the same cell as VES-WL-101/102.			
CAPACITY:	**~50 Gallons**			
NOTES:	**Receives**: Inputs come from floor drains. Waste is jetted or gravity-fed from floor drains into the tank. **Outputs:** Waste is jetted to VES-WL-132.			

UNIT NAME:	Process Condensate Collection Tanks: VES-WL-106 and VES-WL-107		BUILDING #	CPP-604
NUMBER OF UNITS:	2	PROCESS CODES:	S02, T01	
DESCRIPTION:	**Size:** Each tank is cylindrical and vertical-oriented with domed ends. The dimensions of the tanks are an outside diameter of 8' and a length of 14', with a tangent-to-tangent length of 12'. The tanks construction material is Type 347 SS. **Secondary Containment:** The tanks are located in a cell constructed of reinforced concrete, with the floor and lower 1' of the wall lined with SS. A 6-inch high barrier is located in front of the condensate collection cell door to prevent leakage to the access corridor. The cell has the dimensions of 46' x 21' x 35' 6". The liquid drains to either SU-WL-145 or SU-WL-146. Upon high alarm, the liquid in the sump is jetted as part of the PWL Collection System to VES-WL-133.			
CAPACITY:	**~5,000 Gallons Each**			
NOTES:	**Receives:** Inputs are evaporator vapor condensate from VES-WL-131. Waste is pumped into the tank. **Outputs:** Waste is normally pumped to the LET&D facility.			

UNIT NAME:	Process Condensate Collection Tank: VES-WL-163		BUILDING #	CPP-604
NUMBER OF UNITS:	1	PROCESS CODES:	S02, T01	
DESCRIPTION:	**Size:** This tank is cylindrical and vertical-oriented with domed ends. The dimensions of the tank are an outside diameter of 8' and a length of 14', with a tangent-to-tangent length of 12'. The tank construction material is Type 304L SS. **Secondary Containment:** The tank is located in a cell constructed of reinforced concrete, with the floor and lower 1' of the wall lined with SS. A 6-inch high barrier is located in front of the condensate collection cell door to prevent leakage to the access corridor. The vault has the dimension of 46' x 21' x 35' 6". The liquid drains to either SU-WL-145 or SU-WL-146. Upon high alarm, the liquid in the sump is jetted as part of the PWL Collection System to VES-WL-133.			
CAPACITY:	**5,000 Gallons**			
NOTES:	**Receives:** Input is evaporator vapor condensate from VES-WL-131. Waste is pumped into the tank. **Outputs:** Waste is normally pumped to the LET&D Facility.			

III.A.2.1. The following components are integral equipment to the PEWE Distillation Systems. Failure of one of these components will result in the shut down of the associated PEWE distillation unit. These components may contain *de minimus* volumes of waste during operations and shut down.

EVAPORATOR UNIT (EVAP-WL-129)

VES-WL-130 Mist Eliminator
HE-WL-307 Evaporator Reboiler
HE-WL-308 Evaporator Condenser

EVAPORATOR UNIT (EVAP-WL-161)

VES-WL-162 Evaporator Separator
HE-WL-300 Evaporator Reboiler
HE-WL-301 Evaporator Condenser

III.A.3. Liquid Effluent Treatment and Disposal Tanks (LET&D)

UNIT NAME:	**Acid Fractionator Waste Feed Head Tank: VES-WLK-197**		**BUILDING #**	**CPP-1618**
NUMBER OF UNITS:	**1**	**PROCESS CODE:**	**S02**	
DESCRIPTION:	**Size:** The tank is cylindrical and horizontal-oriented with domed ends. The dimensions of the tank are an outside diameter of 3' and a length of 5' 6", with a tangent-to-tangent length of 4'. The tank construction material is Type 304L SS. **Secondary Containment:** The tank is located in the top of CPP-1618, above the Fractionator Cell 1 containment. The tank is located in a vault made of steel-reinforced concrete, with the floors and lower 3' of the walls lined with SS. The floor dimensions of the vault are 17' x 14' 6". The cell drains to a SS lined sump located slightly northeast of the center of the cell. Liquid in the sump is jetted to VES-WL-195 or VES-WL-133. Upon high-high alarm, the feed inlet valve and pump are automatically shut down.			
CAPACITY:	**~270 Gallons**			
NOTES:	**Receives:** Inputs come from VES-WL-106, 107, and 163. Waste is pumped into the tank. **Outputs:** The waste is gravity fed to either Acid Fractionator FRAC-WLL-170 or FRAC-WLK-171.			

UNIT NAME:	Acid Fractionator: FRAC-WLL-170		BUILDING #	CPP-1618
NUMBER OF UNITS:	1	PROCESS CODES:	S02, X99	
DESCRIPTION:	**Size:** The two acid fractionators are identical thermal siphon units, with an inside diameter of 42 " and a height of approximately 28' 6" (24' from tangent to tangent). Both units consist of vertical-oriented, cylindrical tanks, with domed ends. Hastelloy G-30 is used for equipment and piping. **Secondary Containment:** Acid Fractionator Cell 2 is 17' long and 14' 6" wide. The cell is constructed of steel-reinforced concrete with a stainless-steel liner that is 3' high. The cell has a door in the east wall. In front of the door is a step measuring 3' 10" by 3' 10" by 4". The floor is sloped toward a sump, which is located slightly to the northeast of the center of the cell.			
CAPACITY:	~460 Gallons			
NOTES:	**Receives:** Waste is gravity-fed from VES-WLK-197. **Outputs:** Overheads pass through air pollution control equipment and are transferred out the INTEC Main Stack. Bottoms are collected in VES-WLL-195.			

UNIT NAME:	Acid Fractionator: FRAC-WLK-171		BUILDING #	CPP-1618
NUMBER OF UNITS:	1	PROCESS CODES:	S02, X99	
DESCRIPTION:	**Size:** The two acid fractionators are identical thermal siphon units, with an inside diameter of 42" and a height of approximately 28' 6" (24' from tangent to tangent). Both units consist of vertical-oriented, cylindrical tanks, with domed ends. Hastelloy G-30 is used for equipment and piping. **Secondary Containment:** Acid Fractionator Cell 1 is 17' long and 14' 6" wide. The cell is constructed of steel-reinforced concrete with a stainless-steel liner that is 3' high. The cell has a door in the west wall. The floor is sloped toward a sump, which is located in the cell.			
CAPACITY:	~460 Gallons			
NOTES:	**Receives:** Waste is gravity-fed from VES-WLK-197. **Outputs:** Overheads pass through air pollution control equipment and are transferred out the INTEC Main Stack. Bottoms are collected in VES-WLL-195.			

UNIT NAME:	**Acid Fractionator Bottoms Tank: VES-WLL-195**		**BUILDING #**	**CPP-1618**
NUMBER OF UNITS:	**1**	**PROCESS CODE:**	**S02**	
DESCRIPTION:	**Size:** The tank is a cylindrical and horizontal-oriented tank with domed ends. The dimensions of the tank are an inner diameter of 3' and a length of 5' 9", with a tangent-to-tangent length of 4'. The tank construction material is Type 304L SS. **Secondary Containment:** The tank is located in a pit in Acid Fractionator Cell 2 of CPP-1618, constructed of steel-reinforced concrete with a SS liner. The pit has the dimensions of 7' 10" x 6' 9" x 6'. Upon high alarm, the operator is notified of a potential overfill condition and the need to transfer the waste. The secondary containment can contain 100% of the volume of VES-WLL-195.			
CAPACITY:	**~270 Gallons**			
NOTES:	**Receives:** Inputs are the fractionator bottoms, from either VES-WLL-170 or VES-WLK-171. Waste is gravity fed into the tank. **Outputs:** The waste is pumped to VES-WL-133, VES-WL-101/111, VES-NCR-171, or the TFF.			

UNIT NAME:	**Acid Recycle Tank: VES-NCR-171**	**BUILDING #**	**CPP-659 Annex**
NUMBER OF UNITS:	**1**	**PROCESS CODE:**	**S02**
DESCRIPTION:	**Size:** The tank is cylindrical and horizontal-oriented. The dimensions of the tank are an outside diameter of 11' and a length of 33' 8". The tank construction material is Type 304 SS. **Secondary Containment:** The tank is located in a vault constructed of reinforced concrete with the floor and lower 4' 8" lined with Type 304L SS. The vault has the floor dimensions of 17' 4" x 41' 3", with a minimum containment volume of 24,676 gallons. The cell drains to a gutter on the south side of the vault, which drains to the southeast into a sump unit. Upon high level alarm, liquid in the sump is jetted to VES-NCR-171.		
CAPACITY:	**~22,500 Gallons**		
NOTES:	**Receives:** Inputs come from the fractionator bottoms tank, VES-WLL-195. Waste is pumped into the tank. **Outputs:** Waste is airlifted to VES-NCR-173 and distributed into a common header for use elsewhere at the INTEC.		

UNIT NAME:	**Nitric Acid Head Tank: VES-NCR-173**	**BUILDING #**	**CPP-659 Annex**
NUMBER OF UNITS:	**1**	**PROCESS CODE:**	**S02**
DESCRIPTION:	**Size:** The tank is cylindrical and vertical-oriented. The dimensions of the tank are a diameter of 2' and a length of 4' 8". The tank construction material is Type 304L SS. **Secondary Containment:** The tank is located in the Acid Recycle Tank Vault, constructed of reinforced concrete with the floor and lower 4' 8" of the walls lined with Type 304L SS. The vault has the floor dimensions of 17' 4" x 41' 3", with a minimum containment volume of 24,676 gallons. The cell drains to a gutter on the south side of the vault, which drains to the southeast into a sump unit. Upon high level alarm, the liquid in the sump is jetted to VES-NCR-171.		
CAPACITY:	**~90 Gallons**		
NOTES:	**Receives:** Inputs come from VES-NCR-171. Waste is airlifted into the tank. **Outputs:** The waste is gravity fed to a common header that can be routed for reuse throughout the INTEC.		

III.A.3.1. The following components make up the LET&D Treatment Unit. Failure of one component will result in the shut down of the associated LET&D Distillation Unit. These components may contain waste during operation shut downs.

ACID FRACTIONATOR (FRAC-WLL-170)

HE-WLL-391 Heat Exchanger
HE-WLL-396 Condenser
HE-WLL-398 Reboiler
VES-WLL-198 Liquid Separator
HE-WLL-394 Superheater

ACID FRACTIONATOR (FRAC-WLK-171)

HE-WLK-392 Heat Exchanger
HE-WLK-397 Condenser
HE-WLK-399 Reboiler
VES-WLK-198 Liquid Separator
HE-WLK-395 Superheater

III.A.4. EVAPORATOR TANK SYSTEM (ETS)

UNIT NAME:	Blend Tank VES-NCC-101		**BUILDING NO.**	CPP-659
NUMBER OF UNITS	1	**PROCESS CODE**	S02/T01	
DESCRIPTION:	**Size:** The tank has an approximate diameter of 9 ft 6 in. and a height of 13 ft. It is a vertical, cylindrical tank with domed ends. It is constructed of Nitronic 50 stainless steel. **Secondary Containment:** Located in a concrete cell – 32' 4". x 24'. The floor and lower 3' of the walls are lined with stainless steel. The floor slopes to a drain. An alarm sounds when liquid is detected. Floor is drained to VES-NCC-119.			
CAPACITY	~5,870 Gallons			
NOTES:	**Receives:** Inputs normally come from VES-NCC-102, VES-NCC-103, VES-NCC-119, VES-NCC-122, VES-NCD-123, VES-NCD-129, PEWE, and the TFF. **Output:** The waste is jetted to VES-NCC-102, VES-NCC-103, VES-NCC-119, PEWE, or back to the TFF and is airlifted to VES-NCC-152. May also be airlifted to VES-NCC-102 or VES-NCC-103.			

UNIT NAME:	Hold Tanks VES-NCC-102 and VES-NCC-103		**BUILDING NO.**	CPP-659
NUMBER OF UNITS	2	**PROCESS CODE**	S02/T01	
DESCRIPTION:	**Size:** The tanks have an approximate diameter of 8' and a height of 12'. These vertical cylindrical tanks are equipped with domed ends. They are constructed of Nitronic 50 stainless steel. **Secondary Containment:** Located in a concrete cell 32' 4" x 24'. The floor and lower 3' of the walls are lined with stainless steel. The floor slopes to a drain. An alarm sounds when liquid is detected. Floor is drained to VES-NCC-119.			
CAPACITY	~4,000 Gallons Each			
NOTES:	**Receives:** Input is normally from VES-NCC-101, VES-NCC-102, VES-NCC-103, VES-NCC-119, VES-NCC-122, VES-NCD-123, VES-NCD-129, PEWE, and the TFF. **Output:** The waste is jetted to VES-NCC-101, VES-NCC-102, VES-NCC-103, VES-NCC-119, PEWE, ~~or~~ back to the TFF, or pumped to VES-SRC-131.			

UNIT NAME:	Constant Head Feed Tank VES-NCC-152		**BUILDING NO.**	CPP-659
NUMBER OF UNITS	1	**PROCESS CODE**	S02	
DESCRIPTION:	**Size:** The tank has an approximate diameter of a 2' and a length of 9'. The tank is horizontally oriented, cylindrical and has domed ends. It is constructed of Nitronic 50 stainless steel. **Secondary Containment:** Located in a concrete cell 32' 4" x 24'. The floor and lower 3' of the walls are lined with stainless steel. The floor slopes to a drain. An alarm sounds when liquid is detected. Floor is drained to VES-NCC-119.			
CAPACITY	**~200** Gallons			
NOTES:	**Receives:** The waste is airlifted to VES-NCC-152 from VES-NCC-101. **Output:** The waste is gravity fed to the EVAP-NCC-150 or overflows back to VES-NCC-101.			

UNIT NAME:	Evaporator Flash Column VES-NCC-150		BUILDING NO.	CPP-659
NUMBER OF UNITS	1	PROCESS CODE	S02/X99	
Description:	Size: The column tank has an approximate diameter of 5' 6". and a height of 21' 6" from bottom to the top 14" flange. This tank is vertical and cylindrical with domed ends. It is constructed of G-30 Hastelloy stainless steel. Secondary Containment: Located in a concrete cell 32' 4" x 24'. The floor and lower 3' of the walls are lined with stainless steel. The floor slopes to a drain. An alarm sounds when liquid is detected. Floor is drained to VES-NCC-119.			
Capacity	~2,600 Gallons			
Notes:	Receives: Waste is airlifted to VES-NCC-152 and then gravity fed to VES-NCC-150. Output: The overheads are transferred to VES-NCC-122. The bottoms are transferred to VES-NCC-119 or VES-NCC-101.			

UNIT NAME:	Fluoride Hot Sump Tank VES-NCC-119		BUILDING NO.	CPP-659
NUMBER OF UNITS	1	PROCESS CODE	S02/T01	
Description:	Size: The tank is a horizontal, cylindrical tank with domed ends. It has an approximate diameter of is 9' and length of 16'. It is constructed of Nitronic 50 stainless steel. Secondary Containment: Located in a concrete cell – 24' 2" x 24' 6" x 17' 6". The floor and walls are lined with stainless steel. This area is also connected to an adjacent valve access room 19' 6" by 11' 10". The floor and lower 3' of the wall is lined with stainless-steel. The floor is sloped to a sump that can be jetted to VES-NCC-119. The sump is equipped with a liquid level indicator and an alarm.			
Capacity	~6,500 Gallons			
Notes:	Receives: Normally receives wastes from floor drains, VES-NCC-150, VES-NCC-101, VES-NCC-102, VES-NCC-103, and VES-NCC-108. Output: The waste can be jetted or pumped to the evaporator feed system, the PEWE, or TFF.			

UNIT NAME:	Non-fluoride Hot Sump Tank VES-NCC-122		BUILDING NO.	CPP-659
NUMBER OF UNITS	1	PROCESS CODE	S02/T01	
Description:	Size: The tank is a horizontal cylindrical tank with domed ends. It has an approximate diameter is 7' 6" and a length of 14'. It is constructed of Nitronic 50 stainless steel. Secondary Containment: Located in a concrete cell 24' 2" x 24' 6" x 17' 6". The floor and walls are lined with stainless steel. This area is also connected to an adjacent valve access room – 19' 6" by 11' 10". The floor and lower 3' of the wall is lined with stainless-steel. The floor is sloped to a sump that can be jetted to VES-NCC-119. The sump is equipped with a liquid level indicator and an alarm.			
Capacity	~4,~~1~~300 Gallons			
Notes:	Receives: Normally receives wastes from floor drains, HE-NCC-351, VES-NCD-122, and VES-NCD-129. Output: The waste can be jetted to the evaporator feed system, the PEWE, VES-NCC-119, or TFF.			

UNIT NAME:	Scrub Hold Tank VES-NCC-108		BUILDING NO.	CPP-659
NUMBER OF UNITS	1	PROCESS CODE	S02/T01	
Description:	Size: The tank is a horizontal, cylindrical tank with domed ends, an approximate diameter of 5' and a length of 12'. Secondary Containment: Located in a concrete cell – 33' 4" x 16' 3". The floor and lower 3' of the walls are lined with stainless steel. A sloped, 1"-deep gutter runs along the length of the east wall. The floor drain line is equipped with a liquid level indicator and an alarm. Containment of solution is provided by the floor drain, which directs solution to VES-NCC-119.			
Capacity	~2,000 Gallons			
Notes:	Receives: Condensed liquid from the equipment vent system. Output: The waste can be jetted to VES-NCC-119.			

UNIT NAME:	Mist Collector VES-NCC-116		BUILDING NO.	CPP-659
NUMBER OF UNITS	1	PROCESS CODE	S02	
Description:	Size: The tank is vertical and cylindrical with domed ends, an approximate diameter of 3' 6" and a height of 7' 6". It is designed to remove any liquid from the process and vessel offgas mixture entering the vessel. It is constructed of Type 304 stainless steel Secondary Containment: Located in a concrete cell – 26' 6" x 31' 6". The floor and lower 3' of the walls are lined with stainless steel. The floor has a sump with leak detection. Upon high level alarm, the collected liquid is drained to VES-NCC-122.			
Capacity	~500 Gallons			
Notes:	Receives: Vapor from the evaporator POG before the off-gas is released to APS. Output: The waste is gravity fed to VES-NCC-119.			

UNIT NAME:	Vent Condenser Knockout Drum VES-NCC-136	BUILDING NO.	CPP-659
NUMBER OF UNITS	1 PROCESS CODE	S02	
Description:	Size: The tank is a vertical, cylindrical vessel with domed ends, an approximate diameter of 16" and a height of 6'. It is constructed of Type 304 stainless steel. Secondary Containment: Located in a concrete cell – 26' 6" x 31' 6". The floor and lower 3' of the walls are lined with stainless steel. The floor has a sump with leak detection. Upon high level alarm, the collected liquid is drained to VES-NCC-122.		
Capacity	~60 Gallons		
Notes:	Receives: Vapor from the evaporator POG before the off-gas is released to the APS. Output: The waste is gravity fed to VES-NCC-108.		

III.A.5 The following component is integral equipment to the ETS distillation system. Failure of this component will result in the shut down of the ETS distillation unit. This component may contain de minimus volumes of waste during operations and shut down.

EVAPORATOR UNIT (EVAP-NCC-150)

HE-NCC-351 Condenser

III.A.6. INTEGRATED WASTE TREATMENT UNIT (IWTU)

UNIT NAME:	Waste Feed Tank, VES-SRC-131	**BUILDING NO.**	CPP-1696
NUMBER OF UNITS	1 **PROCESS CODE**	S02, T01	
DESCRIPTION:	**Size:** The feed tank is a vertical, cylindrical vessel with domed ends, with an approximate diameter of 9' 5" and 10' 9" in. in height. It is constructed of Type 304L stainless steel. **Secondary Containment:** Located in a shielded cell – 37' 2" x 34' 5. The floor and lower 2' of the walls are lined with stainless steel. The floor has a sump (1 'x 1' x 1') with leak detection. Upon high level alarm, the collected liquid is jetted to VES-SRC-131, VES-NCC-101, VES-NCC-102, VES-NCC-103.		
CAPACITY	**~6,700 Gallons**		
NOTES:	**Receives:** Liquid waste from the NWCF Hold Tanks, VES-NCC-102 and ~~-103,~~ and CPP-1696 sumps **Outputs:** The waste is normally pumped to the DMR. It can also be pumped to VES-NCC-101, VES-NCC-102, or VES-NCC-103.		

UNIT NAME:	Product Receiver/Coolers COL-SRC-170A, B, and C	**BUILDING NO.**	CPP-1696
NUMBER OF UNITS	3 **PROCESS CODE**	S02	
DESCRIPTION:	**Size:** The three Product Receiver/Cooler tanks are identical vertical, cylindrical vessels with domed tops and cone-shaped bottoms. They are approximately 4' in diameter and 7' 9" in height. They are constructed of Type 316H stainless steel. **Secondary Containment:** Located in shielded cells – 17' 6" x 29'. The floor and lower 1' of the walls are lined with stainless steel. The floor has a sump (1' x 1' x 1') with leak detection. Upon high level alarm, the collected liquid is pumped to VES-SRC-131.		
CAPACITY	**~512 Gallons Each**		
NOTES:	**Receives:** Primarily receives sodium carbonate based granular solid treatment product from the DMR. Also, receives fines from the Process Filter, Offgas Filter, CRR, Product Receiver Filter, Vacuum Filter, and Post Filter. **Outputs:** The IWTU treatment product is gravity loaded into canisters for storage and transport for ultimate disposal.		

UNIT NAME:	Firewater Collection Tank TK-SRH-196	**BUILDING NO.**	CPP-1696
NUMBER OF UNITS	1 **PROCESS CODE**	S02	
DESCRIPTION:	**Size:** The Firewater Collection Tank is a horizontal, cylindrical vessel with domed ends. It is approximately 44' 7" long and 8' in diameter. **Secondary Containment:** The Firewater Collection Tank is a double shelled tank that is directly buried in the soil. The tank is equipped with leak detection and the ability to remove liquid from the annulus and return it to the tank. Any liquids collected in the tank will be removed via an external portable pump.		
CAPACITY	**~15,000 Gallons**		
NOTES:	**Receives:** During a fire incident, this tank will collect firewater from the Process and Building HEPA Filters and the Mercury Adsorbers. **Output:** If removal of firewater from this tank is necessary, a portable pump will be used to empty the contents.		

III.A.6.1. The following components are integral to the Integrated Waste Treatment Unit. Failure of one of these components will result in the shut down of the associated IWTU. These components may contain waste during operation and/or shut downs.

VES-SRC-140	Denitration and Mineralization Reformer
F-SRC-153	Process Gas Filter
VES-SRC-160	Carbon Reduction Reformer
COL-SRC-160	Offgas Cooler
F-SRC-160	Offgas Filter
F-SRH-141A/B	Mercury Adsorbers
F-SRC-180	Product Receiver Filter
VES-SRC-180	Product Receiver Filter Product Pump
F-SRC-185	Product Handling Vacuum Filter
F-SRC-186	Product Handling Post Filter

III.B. PERMITTED AND PROHIBITED WASTES IN THE INTEC LIQUID WASTE MANAGEMENT SYSTEM UNITS

III.B.1. Storage of mixed wastes in tanks is authorized in the tanks identified in Permit Condition III.A. of this Permit.

III.B.2. Discharge of hazardous only waste, including de minimus volumes, to the ILWMS is not authorized.

III.B.3. The Permittee may store the mixed waste identified in the Part A of Attachment 1 of this Permit, in the tanks identified in Permit III.A., as modified below:

III.B.3.a. If a prohibited waste (see Attachment 2, Section C-2a(1)) is identified in the ILWMS the following shall occur:

III.B.3.a.1. The affected tanks and process lines shall be isolated from the remainder of the ILWMS until such time as the Director approves the completed remedial measures.

III.B.3.a.2. A notification will be sent to DEQ within seven (7) days, in accordance with Permit Condition I.Y., and shall include at least the following information:

- A list of the affected tanks and process lines isolated;
- A description of the prohibited waste including volume and potential hazards;
- Proposed measures necessary to neutralize or remove the prohibited waste;
- Proposed schedule to remediate the affected tanks; and
- Proposed measures to prevent recurrences.

III.B.3.b. The Director shall approve all remedial measures prior to implementation.

III.B.3.c. The affected tanks and ancillary equipment shall remain isolated until such time as the Director approves the completed remedial measures.

III.C. SECONDARY CONTAINMENT AND CONTAINMENT SYSTEM SUMPS

III.C.1. The Permittee shall operate and maintain Secondary Containment Systems that are capable of detecting and collecting releases, and which prevent any migration of waste or accumulated liquid out of the system to the soil, ground water, or surface water during use of the tank systems, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.193] and Attachment 1 of this Permit.

III.C.2. Secondary Containment Systems, materials of construction, and design calculations are located in Attachment 1 (D-2f(1)(b) and B-1) of the Permit.

III.C.3. The following requirements apply to all ILWMS tank containment sumps:

III.C.3.a. The liquid level in all tank sumps shall be monitored and recorded daily;

III.C.3.b. The Permittee shall note in the Operating Record any rise in the sump level during waste management operations.

III.C.3.c. If the liquid level in a sump exceeds the high/high setpoint or overflows the sump, the Permittee shall immediately comply with the requirements of IDAPA 58.01.05.008 [40 CFR § 264.196].

III.C.4. The following requirements apply to ILWMS ancillary equipment (valve-box) containment sumps:

III.C.4.a. Ancillary equipment sumps shall be checked for free liquids prior to initiating waste transfers. The presence of liquids shall be noted in the Facility Operating Record.

III.C.4.b. The Permittee shall note in the Operating Record any rise in the sump level during waste management operations.

III.C.4.c. If liquid levels overtop a sump during waste transfer operations, the Permittee shall immediately discontinue the waste transfer operation and take the necessary response actions, in accordance with Permit Condition III.C.6. and IDAPA 58.01.05.008 [40 CFR § 264.196].

III.C.4.d. If the liquid level in a sump increases during waste transfer operations but do not overtop the containment sump, the waste transfer may continue. Upon completion of the waste transfer, the Permittee shall comply with Permit Condition III.C.6. and IDAPA 58.01.05.008 [40 CFR § 264.196(b)].

III.C.5. In addition to the requirements of Permit Condition III.C.3., the following requirements apply to VES-NCC-119 only:

III.C.5.a. Detection of liquids in the VES-NCC-119 sump shall be reported in accordance with Permit Condition I.T.

III.C.5.b. The operator shall determine if the source of sump liquids is a leak in VES-NCC-119

III.C.5.b.i. If the source of liquids is determined to be non-waste (e.g., steam leak, pump priming water, etc) then operations of VES-NCC-119 may continue provided the level of liquids remains below the action levels set in Permit Condition III.C.3;

III.C.5.b.ii. If the source of liquids either is a leak in VES-NCC-119 or can not be determined, the Permittee shall respond in accordance with IDAPA 58.01.05.008 [40 CFR §264.196]. This includes closing the secondary containment sump drain lines that empty to VES-NCC-119.

III.C.6. The Permittee shall immediately remove a tank system from service if there is a leak or spill from the tank system Secondary Containment, or if the system or Secondary Containment are unfit for use, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196]. The Permittee shall then:

III.C.6.a. Immediately stop the flow of hazardous waste into the tank system or Secondary Containment System and inspect the system to determine the cause of the release, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(a)] and Attachment 1 and 7 [D-2f(1)(b) and G-4] of this Permit.

III.C.6.b. Within 24 hours, remove as much of the waste as is necessary to prevent further releases of hazardous waste and to allow inspection and repair of the tank system, including the Secondary Containment System, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(a) and (b)], and Attachment 1 (D-2f(1)(b)) of this Permit.

III.C.6.b.1. If, after pumpable waste is removed from a sump, liquids continue to be detected, the facility shall:

- Notify DEQ of the sump involved, volume of liquid, and proposed path forward within seven (7) days; and
- The Permittee shall initiate corrective measures to remove liquids from the sump within seven (7) days of notifying DEQ. Removal by evaporation of non-pumpable (using existing steam jets) volumes of liquid is authorized.

III.C.6.c. Follow the verbal and written reporting requirements for any release to the environment, in accordance with Permit Condition I.T. of this Permit.

III.C.7. The Permittee shall isolate and close any unfit portion of the ILWMS System, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.197], Permit Condition II.K., and Attachment 8 of this Permit unless he satisfies the following requirements:

III.C.7.a. For a release caused by a spill that has not damaged the integrity of the system, the Permittee shall remove the released waste and make any necessary repairs before returning the tank system to service, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(e)(2)].

III.C.7.b. For a release caused by a leak from a primary tank system to a Secondary Containment System, the Permittee shall repair the tank system prior to returning it to service, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(e)(3)].

III.C.7.c. If the Permittee replaces a component of the tank system to eliminate the leak, that component must satisfy the requirements for new tank systems or components in IDAPA 58.01.05.008 [40 CFR §§ 264.192 and 264.193].

III.C.8. If the Permittee has repaired a tank system, in accordance with Permit Condition III.C.7. of this Permit, and the repair has been extensive (e.g., installation of an internal liner, repair of a ruptured primary containment or Secondary Containment vessel), the tank system must not be returned to service until the Permittee obtains a certification by an independent, qualified, registered, professional engineer that the repaired system is capable of handling hazardous waste without release for the intended life of the system. The certification shall be submitted to the Director within seven (7) days after returning the tank system to use, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.196(f)], Permit Condition I.W., and retained in accordance with Permit Conditions I.Z. and II.J., and Attachment 4 (F-2b(2)(a)) of this Permit.

III.D. TANK SYSTEM OPERATING CONDITIONS

III.D.1. The Permittee shall not place waste or treatment reagents in a tank system if they could cause the tank, ancillary equipment, or containment system to rupture, leak, corrode, or otherwise fail, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.194(a)] and Attachments 1, 2, and 6 of this Permit.

III.D.2. The Permittee shall use appropriate controls and practices to prevent spills and overflows from the tank or containment systems, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.194(b)(1)(2)] and the following Table:

INTEC LIQUID WASTE MANAGEMENT SYSTEM
TANK DIMENSIONS, HIGH ALARM SETPOINTS, AND OVERFLOW

TANK	APPROXIMATE OUTSIDE DIMENSIONS	HIGH ALARM SETPOINT NOT TO EXCEED[1]	OVERFLOW (IF ALARMS IGNORED)
VES-WL-132	11’ 0” × 9’ 0”	9” water column (wc) (4,230 Gallons)	Designed to Overflow to VES-WL-133
VES-WL-133	10’ 0” × 34’ 0”	109” wc[4] (18,000 gallons)	Overflows to the Vault Sump, Which is Equipped with Leak Detection
VES-WL-102	10’ 0” × 33’ 0”	104” wc[4] (17,000 gallons)	Overflows to VES-WL-101
VES-WL-108	5’ 8” × 2’ 0”[2]	NA	Designed to Overflow to VES-WL-131 or VES-WL-133
VES-WL-109	7’ 2”× 3’ 0”[2]	NA	Designed to Overflow to VES-WL-133 or VES-WL-102
EVAP-WL-129	19’ 6” × 3’ 0”	75” wc[4] (750 gallons)	Overflows to VES-WL-131 or VES-WL-134
EVAP-WL-161	19’ 6” × 3’ 0”	75” wc[4] (750 gallons)	Overflows to VES-WL-131
VES-WL-131	2’ 0” × 2’ 10”	18” wc[3] (59 gallons)	Overflows to VES-WL-161, VES-WL-129, VES-WL-106, VES-WL-107, VES-WL-163, or VES-WL-134
VES-WL-134	8’ 9” × 3’ 6”	90” wc (450 gallons)	Overflows to VES-WL-129, VES-WL-161, VES-WL-131, VES-WL-106, VES-WL-107, or VES-WL-163
VES-WL-101	10’ 0” × 33’ 0”	104” wc[4] (E), 123” wc (P) (17,000 gallons)	Overflows to VES-WL-102
VES-WL-111	3’ 6” × 4’ 8” × 12’ 0”	34” wc[4] (1,275 gallons)	Overflows to VES-WL-101, VES-WL-102, or VES-WL-133
VES-WL-106	14’ 0” × 8’ 0”	130” wc[3] (4,250 gallons)	Overflows to VES-WL-107, VES-WL-163, VES-WL-131, VES-WL-129, VES-WL-161, or VES-WL-134

TANK	APPROXIMATE OUTSIDE DIMENSIONS	HIGH ALARM SETPOINT NOT TO EXCEED[1]	OVERFLOW (IF ALARMS IGNORED)
VES-WL-107	14’ 0” × 8’ 0”	130” wc[3] (4,250 gallons)	Overflows to VES-WL-106, VES-WL-163, VES-WL-131, VES-WL-129, VES-WL-161, or VES-WL-134
VES-WL-163	14’ 0” × 8’ 0”	130” wc[3] (4,250 gallons)	Overflows to VES-WL-106, VES-WL-107, VES-WL-131, VES-WL-129, VES-WL-161, or VES-WL-134
VES-WM-100	10’ 0” × 33’ 0”	NA	Designed to overflow to VES-WM-101
VES-WM-101	10’ 0” × 33’ 0”	NA	Designed to overflow to VES-WM-102
VES-WM-102	10’ 0” × 33’ 0”	94” wc[4] (E), 135” wc (P) (16,000 gallons)	Overflows to VES-WM-101
VES-WL-103	8” 0” × 14’ 0”	75.5” wc (4,500 gallons)	Overflows to VES-WL-104 or the Vault Sump, Which is Equipped with Leak Detection
VES-WL-104	8” 0” × 14’ 0”	75.5” wc (4,500 gallons)	Overflows to VES-WL-103, VES-WL-105, or the Vault Sump, Which is Equipped with Leak Detection
VES-WL-105	8” 0” × 14’ 0”	75.5” wc (4,500 gallons)	Overflows to VES-WL-104
VES-WG-100	9’ 0” × 10’ 0”	90” wc (4,250 gallons)	Overflows to the Vault Sump, Which is Equipped with Leak Detection
VES-WG-101	9’ 0” × 10’ 0”	90” wc (4,250 gallons)	Overflows to the Vault Sump, Which is Equipped with Leak Detection
VES-WH-100	9’ 0” × 10’ 0”	90” wc (4,250 gallons)	Overflows to the Vault Sump, Which is Equipped with Leak Detection
VES-WH-101	9’ 0” × 10’ 0”	90” wc (4,250 gallons)	Overflows to the Vault Sump, Which is Equipped with Leak Detection

TANK	APPROXIMATE OUTSIDE DIMENSIONS	HIGH ALARM SETPOINT NOT TO EXCEED[1]	OVERFLOW (IF ALARMS IGNORED)
VES-WL-135	10" × 1' 6"	12" wc (10 gallons)	New Waste Calcining Facility Off-gas Line or the Vault Sump, Which is Equipped with Leak Detection
VES-WL-136	10" × 1' 6"	12" wc (10 gallons)	New Waste Calcining Facility Off-Gas Line or the Vault Sump, Which is Equipped with Leak Detection
VES-WL-137	13" × 2' 0"	18" wc (28 gallons)	Overflows to VES-OGF-132, VES-WL-104, or the Vault Sump, Which is Equipped with Leak Detection
VES-WL-138	13" × 2' 0"	18" wc (28 gallons)	Overflows to the Vault Sump, Which is Equipped with Leak Detection
VES-WL-139	10" × 1' 6"	12" wc (10 gallons)	Overflows to the Vault Sump, Which is Equipped with Leak Detection
VES-WL-142	10" × 1' 6"	12" wc (10 gallons)	Overflows to the Vault Sump, Which is Equipped with Leak Detection
VES-WL-144	13" × 2' 0"	18" wc (28 gallons)	Overflows to the Vault Sump, Which is Equipped with Leak Detection
VES-WL-150	2' 3" × 2' 0"	31" wc[3] (48 gallons)	Overflows to the Vault Sump, Which is Equipped with Leak Detection
VES-WLK-197	3' 0" × 5' 6"	28" wc[3] (225 gallons)	Overflows to VES-WLL-195
FRAC-WLL-170	28' 6" × 3' 6"[2]	40" wc[3, 4] (325 gallons)	Overflows to VES-WLL-195
FRAC-WLK-171	28' 6" × 3' 6"[2]	40" wc[3, 4] (325 gallons)	Overflows to VES-WLL-195
VES-WLL-195	3' 0" × 5' 9"	28" wc[4] (220 gallons)	Overflows to FRAC-WLL-170, FRAC-WLK-171, or the Vault Sump, Which is Equipped with Leak Detection

TANK	APPROXIMATE OUTSIDE DIMENSIONS	HIGH ALARM SETPOINT NOT TO EXCEED[1]	OVERFLOW (IF ALARMS IGNORED)
VES-NCR-171	11' 0" × 33' 8"	109" wc[4] (21,300 gallons)	Overflows to the Vault Sump, Which is Equipped with Leak Detection
VES-NCR-173	4' 8" × 2' 0"	NA	Designed to Overflow to VES-NCR-171
VES-NCC-101	9' 6" x 13'	113" wc[3 and 4] (4910 gallons)	Overflows to VES-NCC-119
VES-NCC-102	8' 1" x 12'	111" wc[3 and 4] (3455 gallons)	Overflows to VES-NCC-119
VES-NCC-103	8' 1" x 12'	111" wc[3 and 4] (3455 gallons)	Overflows to VES-NCC-119
VES-NCC-152	2' 1" x 9' 2"	N/A	Designed to Overflow to VES-NCC-101
VES-NCC-150	5' 6" x 21' 6"	158" wc[3 and 4] (2362 gallons)	Overflows to VES-NCC-122
VES-NCC-119	9' 1" x 13' 6"	84" wc[3 and 4] (5765 gallons)	Overflows to room 101 that has a sump with leak detection
VES-NCC-122	7' 6" x 14'	78" wc[3 and 4] (4180 gallons)	Overflows to VES-NCC-119
VES-NCC-108	5' x 14'	36" wc[4] (1500 gallons)	Overflows to VES-NCC-119
VES-NCC-116	3' 6" x 7' 6"	12" wc (70 gallons)	Overflows to the offgas system
VES-NCC-136	1' 4" x 6'	12 inches (17 gallons)	Overflows to the offgas system
VES-SRC-131	9' 5" x 14' 1"	90% of capacity (6,030 gallons)	Overflows to the SU-SRC-190 sump, which is equipped with leak detection.
TK-SRH-196	8' x 44' 7"	95% of capacity (14,250 gallons)	Overflows to the transfer line back to the IWTU

1 High alarm set points may be exceeded on a case-by-case basis (e.g., to allow tanks to be filled to capacity with water to provide shielding during periods of maintenance, or when tanks are designed to overflow to other tanks). When allowed, notations will be made in the Operating Record. In actual practice the high alarm setpoint will be set at or below the indicated value. Alarm set points for tanks with more than one instrument have a setpoint for both instruments listed. The new electronic, or DCS, instruments are designated as (E) and the older pneumatic-type instruments are designated as (P). Volume given is based on liquids with a specific gravity of 1.0; actual volume is calculated based on the measured specific gravity.

2 Height measured from the bottom of the lower connection to the top of the upper connection.

3 This is a high-high alarm setpoint.

4 Density compensated instrument. Density compensation is used to read true level that will not be affected by the solution density.

III.D.2.a. Any overfill events, except as authorized in III.D.7., shall be recorded in the Facility Operating Record and included in either the Permit Condition I.T. or I.U. Report (as appropriate).

III.D.2.b. The tank operating procedures shall be reviewed and modified, as appropriate, to prevent recurrences of overfill situations.

III.D.3. Waste transfers are to be minimized to reduce the potential for releases to the environment.

III.D.4. Tank inventory records, including tank volume changes as a result of transfers, shall be maintained as part of the Operating Record, in accordance with Permit Condition II.J.

III.D.5. If the waste volume increase in the influent and the related decrease in the effluent tanks vary by more than (+)10 percent (10%) or (-)3 percent (3%), but there is no evidence of a release, then the circumstances must be reported in the Permit Condition I.U. Report.

III.D.6. If a release during transfer is suspected, based on inconsistent tank volumes, detection of liquids in the Secondary Containment System or other information, the requirements of Permit Condition I.T.1. shall be followed.

III.D.7. Completely filling a tank with water for shielding purposes during maintenance/ manned entry shall be noted in the Facility Operating Record. No additional reporting is required unless the procedure overfills the tank, resulting in a discharge to the Secondary Containment System.

III.D.8. Transfers through lines equipped with carboys, or other containers, used as leak detection devices, must be monitored before, during (as appropriate), and immediately following transfers to ensure that the containers do not overflow, resulting in a spill or release to the environment. Such monitoring will be documented in the facility operating record. If liquids are detected in quantities that exhibit a potential for overflow, the transfer will be terminated.

III.E. INSPECTION SCHEDULES AND PROCEDURES

III.E.1. The Permittee shall develop and maintain a schedule and procedures for inspecting the overfill controls, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.195(a)] and Attachment 4 of this Permit.

III.E.2. The Permittee shall inspect the following, at least once each operating day, in accordance with Attachment 4 (F-2a and Appendices F-2 – F-~~6~~7) of this Permit:

III.E.2.a. Data gathered from monitoring and leak detection equipment and overfill controls to ensure that the tank system is being operated according to design; and

III.E.2.b. The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the Secondary Containment System and ancillary equipment, to detect corrosion or signs of release of hazardous waste when performing equipment maintenance or repair inside a cell or vault.

III.E.3. The Permittee shall visually inspect tanks and ancillary equipment, located within radiological containment areas, daily whenever the cells are entered. The inspection protocols for the initial entrance inspection, and on-going daily inspections, may be established as part of the specific work permit.

III.E.4. The inspection protocols shall be placed in the Facility Operating Record.

III.E.5. The results of all inspections shall be documented in accordance with Permit Condition II.J.1.

III.F. IGNITABLE OR REACTIVE WASTES

Ignitable or reactive waste shall not be placed in the tank systems unless the waste is treated, rendered, or mixed before or immediately after placement in the tank systems so that:

III.F.1. The resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste under IDAPA 58.01.05.005 [40 CFR §§ 261.21 or 261.23]; and

III.F.2. The requirements of IDAPA 58.01.05.008 [40 CFR § 264.17(b)] are satisfied.

III.G. INCOMPATIBLE WASTE

The Permittee shall not place incompatible waste or materials that are incompatible in the same tank system, except in accordance with IDAPA 58.01.05.008 [40 CFR § 264.199(a)].

MODULE IV
TREATMENT IN TANKS

IV.A. SOLIDS SETTLING, CHEMICAL ADDITION, WASTE BLENDING AND PH ADJUSTMENT

IV.A.1. Treatment by solids settling is authorized in VES-WL-132.

IV.A.2. Chemical addition, waste blending, and pH adjustment are permitted treatment activities in the following tanks:

VES-WL-133, VES-WL-102, VES-WG-100, VES-WG-101, VES-WH-100, VES-WH-101, VES-WL-101, VES-WL-111, VES-WM-100, VES-WM-101, VES-WM-102, VES-WL-106, VES-WL-107, VES-WL-163, VES-WL-103, VES-WL-104, VES-WL-105, VES-NCC-101, VES-NCC-102, VES-NCC-103, VES-NCC-108, VES-NCC-119, ~~and~~ VES-NCC-122, and VES-SRC-131.

IV.A.3. Treatment failure shall be indicated by the following:

IV.A.3.a. The inability to achieve the treatment objective of creating waste that is acceptable to the ~~PEWE~~ ILWMS according to the WAC; or

~~IV.A.3.b. The inability to achieve the treatment objective of creating waste that is acceptable to the ETS according to the WAC; or~~

IV.A.3.~~c~~b. The treatment tank reaching operational capacity prior to completion of the pH adjustment or blending operation.

IV.A.4. If a specific treatment method fails the following shall occur:

IV.A.4.a. All treatment failures shall be reported in the Permit Condition I.U. Report.

IV.A.4.b. If a second treatment is performed on the same batch and the waste still does not meet the WAC, then:

- DEQ shall be notified within 72 hours via telephone or facsimile;
- The waste shall be re-characterized, and DEQ shall be provided with the new proposed treatment plan for that batch; and
- The current treatment procedure shall be revised through a Permit Modification to prevent repeated failures.

IV.A.4.c. If a treatment procedure fails a second time, but on a different batch than that which failed earlier, the failure shall not only be reported in the Permit Condition I.U.

Report, but the treatment procedure shall also be analyzed to determine the cause of the failures and how to prevent further failures.

IV.A.4.d. If a treatment procedure fails three (3) times, it shall be reported in the Permit Condition I.U. Report and a new treatment method must be implemented through a Permit Modification in accordance with Permit Condition I.D.

IV.A.5. Treatment volumes for each tank shall be subject to the limits found on Page 3c of 6 in the Part A, found in Attachment 1 of this Permit.

IV.B. PERMITTED/PROHIBITED WASTE TO BE TREATED

IV.B.1. Treatment of hazardous only (no radioactive waste component) waste is not authorized.

IV.B.2. The Permittee may pH adjust or blend the wastes identified in Permit Condition III.B.3. of this Permit, except that blending or pH adjustment of wastes to comply with LDR is not authorized.

IV.B.3. Blending and/or pH adjustment is a pre-treatment process meant only to facilitate further treatment by evaporation/distillation in the PEWE, LET&D, ETS, or other INTEC Treatment Units.

IV.B.4. Blending or pH adjustment to meet Land Disposal Restriction requirements is not authorized.

IV.B.5. The Permittee shall minimize waste and material transfers through the ILWMS process lines since transfers increase the potential for releases to the environment.

IV.B.6. Addition of acid to ensure radioactive components of the waste remain in solution to preclude the possibility of a criticality event, is not subject to regulation under this Permit except for the following:

IV.B.6.a. The addition of materials to a tank shall not result in overfilling of the tank.

IV.B.6.b. The Permittee shall ensure compliance with Permit Conditions III.F. and III.G. prior to initiating chemical addition procedures.

IV.C. RECORD KEEPING

IV.C.1. The Permittee shall record the following information associated with each blending operation or pH adjustment:

IV.C.1.a. Date and time of treatment;

IV.C.1.b. Tank where treatment occurs;

IV.C.1.c. Initial volume of waste in tank;

IV.C.1.d. Volume of waste added for blending or volume of acid/base added for pH adjustment;

IV.C.1.e. Cross references to any waste analyses, including field methods, performed on the tank contents or documentation of the process knowledge used to determine the need for treatment;

IV.C.1.f. Treatment failures as defined in Permit Condition IV.A.3.; and

IV.C.1.g. Final volume and composition (parameters of concern and underlying hazardous constituents) of the waste after blending and/or pH adjustment.

MODULE V

MISCELLANEOUS TREATMENT

V.A. TREATMENT BY DISTILLATION, ~~AND~~ EVAPORATION, OR STEAM REFORMING

The Permittee may treat aqueous liquid waste ~~by distillation~~ in the following treatment units:

V.A.1. Process Equipment Waste Evaporators (PEWE).

V.A.1.a. The PEWE consists of two (2) similarly designed thermo-siphon evaporators and associated ancillary equipment.

V.A.1.b. A complete description of the PEWE is found in Attachment 1 of this Permit and summarized in Exhibit D-1 Attachment 1 of this Permit.

V.A.2. Liquid Effluent Treatment and Disposal Facility (LET&D).

V.A.2.a. The LET&D consists of two (2) fractionation columns and associated ancillary equipment.

V.A.2.b. A complete description of the LET&D is found in Attachment 1 of this Permit and summarized in Exhibit D-~~3~~ 2 Attachment 1 of this Permit.

V.A.3. Evaporator Tank System (ETS)

V.A.3.a. The ETS consists of a thermo-siphon evaporator and associated ancillary equipment.

V.A.3.b. A complete description of the ETS is found in Attachment 1 of this Permit and summarized in Exhibit D-~~4~~ 3 Attachment 1 of this Permit.

V.A.4. Integrated Waste Treatment Unit (IWTU)

V.A.4.a. The IWTU consists of two steam reformers and associated ancillary equipment.

V.A.4.b. A complete description of the IWTU is found in Attachment 1 of this Permit and summarized in Exhibit D-4 Attachment 1 of this Permit.

V.B. PERMITTED AND PROHIBITED WASTE

V.B.1. The PEWE may process the waste described in Permit Condition III.B., subject to the following supplemental conditions:

V.B.1.a. Waste containing greater than or equal to 260 mg/l Hg may not be processed in the PEWE;

V.B.1.b. Total organic carbon concentration in the feed shall be less than 800 parts per million;

V.B.1.c. If the feed contains ≥ 50 ppm but < 150 ppm chlorides, the following equation applies:
$[No_3]$ (in *M*olar) ≥ [Cl] (in ppm) x 0.006 + 0.1

This equation ensures that there are enough nitrates to passivate the stainless steel.

Waste containing greater than 150 ppm chlorides will not be processed in the PEWE. ~~Chloride concentration shall be limited to less than or equal to 150 parts per million as fed~~;

V.B.1.d. Feed shall contain a minimum of a 1:1 mole ratio of aluminum to fluoride; and

V.B.1.e. Sulfate concentration shall be limited to less than, or equal to, 500 parts per million as fed.

V.B.2. The LET&D may process only PEWE overhead condensate waste containing the waste codes identified in Permit Condition III.B, subject to the following supplemental conditions:

V.B.2.a. Waste containing greater than or equal to 260 mg per liter Hg may not be processed in the LET&D;

V.B.2.b. Waste subject to regulation under IDAPA 58.01.05.008 [40 CFR Part 264 Subpart AA] may not be processed in the LET&D unless the requirements of Permit Condition II.M are satisfied; and

V.B.2.c. Feed shall contain a minimum of a 1:1 mole ratio of aluminum to fluoride.

V.B.3. The ETS may process the waste described in Permit Condition III.B., subject to the following supplemental conditions;

V.B.3.a. Waste containing greater than or equal to 3,000 ppm mercury will not be processed in the ETS;

V.B.3.b. Feed shall contain a minimum of a 1:1 mole ratio of aluminum to fluoride, if fluoride is present in the feed;

V.B.3.c. Maintain at least a 2:1 mole ratio of sodium to sulfate, as fed if the feed contains ≥ 500 ppm sulfate

V.B.3.d. Waste containing greater than 5,000 ppm chloride in solution will not be processed in the ETS. ~~If the feed contains ≥ 50 ppm chlorides the following equation applies:~~
~~$[No_3]$ (in Molar) ≥ [Cl] (in ppm) x 0.006 + 0.1.~~
~~This equation insures that there are enough nitrates to passivate the stainless steel~~

V.B.4. The IWTU may process the waste described in Permit Condition III.B., subject to the following supplemental conditions;

V.B.4.a. Waste containing greater than or equal to 3,000 ppm mercury in solution will not be processed in the IWTU;

V.B.4.b. Waste containing greater than 5,000 ppm chloride in solution will not be processed in the IWTU;

V.B.4.c. Waste containing greater than 3,000 ppm fluoride in solution will not be processed in the IWTU

V.C. OPERATING CONDITIONS

Permit conditions for PEWE, LET&D, ~~and~~ ETS, and IWTU. If liquid is detected in the treatment unit sump the facility shall determine the following;

Source of the liquids. If the source can not be determined or if the source is mixed waste, the affected treatment unit shall be shut down until the source of the liquid is determined and appropriate action is taken in accordance with Permit Condition III.C.

V.C.1. Operating conditions for each of the distillation columns associated with the PEWE System shall include, but not be limited to, the following:

V.C.1.a. The waste feed limit to each distillation column shall not exceed 500 gallons per hour throughput. Total combined waste feed for both evaporators shall not exceed 12,000 gallons per each twenty-four (24) -hour period.

V.C.1.b. Steam, fed to the reboiler, shall be manually discontinued in the event the operating temperature exceeds 108°C.

V.C.1.c. Shutdown shall be initiated when the specific gravity of the liquids in the evaporator equals or exceeds 1.3.

V.C.1.d. Shutdown shall be initiated if the condenser outlet temperature exceeds 50°C.

V.C.1.e. Shutdown shall be initiated if negative atmospheric pressure cannot be maintained in the VOG system providing vacuum for the PEWE.

V.C.1.f. Shutdown shall be initiated if the 604 VOG System or the INTEC Process APS is malfunctioning, or the differential pressure across any HEPA filter bank exceeds five (5) inches of water.

V.C.2. Operating conditions for each of the fractionation columns associated with the LET&D shall include, but not be limited to, the following:

V.C.2.a. The combined maximum operating throughput for the two (2) LET&D fractionation columns shall be 1,100 gallons per hour, or 550 gallon per hour per fractionation column;

V.C.2.b. Process shutdown shall be initiated if the fractionator level drops below ten (10) inches water column;

V.C.2.c. Process shutdown shall be initiated if the temperature on Tray #1 exceeds 130°C;

V.C.2.d. Process shutdown shall be initiated if the fractionator level rises above 40 inches water column;

V.C.2.e. Process shutdown shall be initiated if the separator level exceeds ten (10) inches water column; or

V.C.2.f. Process shutdown shall be initiated if the differential pressure across the HEPA filter exceeds five (5) inches water column or suddenly decreases.

V.C.3. Operating conditions for the distillation column associated with the ETS shall include, but not be limited to, the following;

V.C.3.a. The waste feed limit to the distillation column shall not exceed 500 gallons per hour throughput as determined by tank depletion in VES-NCC-101. Total waste feed shall not exceed 12,000 gallons per each twenty-four (24) -hour period.

V.C.3.b. Steam fed to the reboiler shall be manually discontinued in the event the operating temperature exceeds 117°C as read on T150-1C thru 10C.

V.C.3.c. Shutdown shall be initiated before the specific gravity of the liquids in the evaporator equals or exceeds 1.4 as read on D150-1C.

V.C.3.d. Start-up shall not begin or shutdown shall be initiated if T-351-1 is not operating within normal parameters.

V.C.3.e. Shutdown shall be initiated if the condenser HE-NCC-351 outlet temperature exceeds 60° C as read on T-351-1.

V.C.3.f. Shutdown shall be initiated if atmospheric pressure exceeds 18 in. water column in the ETS as read on P150-1C.

V.C.4. Operating conditions for the IWTU shall include, but not be limited to, the following:

V.C.4.a. The waste feed limit to the DMR shall not exceed 3.5 gallons per minute;

V.C.4.b. Shutdown of the liquid waste feed shall be initiated if the average bed temperature in the DMR drops below 525°C;

V.C.4.c. Shutdown of the liquid waste feed shall be initiated if the average bed temperature in the DMR exceeds 700°C;

V.C.4.d. Shutdown of the liquid waste feed shall be initiated if the average freeboard pressure in the DMR exceeds 12 psig;

V.C.4.e. Shutdown of the liquid waste feed shall be initiated if the superficial fluidization velocity in the DMR drops below 0.8 ft/sec;

V.C.4.f. Shutdown of the liquid waste feed shall be initiated if greater than 8% (rolling ten-minute average wet basis) hydrogen is detected in the DMR offgas;

V.C.4.g. Shutdown of the liquid waste feed shall be initiated if less than 0.5% (rolling ten-minute average dry basis) hydrogen is detected in the DMR offgas;

V.C.4.h. Shutdown of the liquid waste feed shall be initiated if the average bed temperature in the CRR drops below 775°C;

V.C.4.i. Shutdown of the liquid waste feed shall be initiated if the average bed temperature in the CRR exceeds 1150°C;

V.C.4.j. Shutdown of the liquid waste feed shall be initiated if the superficial fluidization velocity to the CRR drops below 1 ft/sec;

V.C.4.k. Shutdown of the liquid waste feed shall be initiated if less than 0.5% (rolling ten-minute average) oxygen is detected in the CRR offgas;

V.C.4.l. Shutdown of the liquid waste feed shall be initiated if the freeboard pressure in the CRR is greater than 0 psig;

V.C.4.m. Shutdown of the liquid waste feed shall be initiated if the average temperature at the outlet of the Offgas Cooler exceeds 250°C;

V.C.4.n. Shutdown of the liquid waste feed shall be initiated if the average temperature at the inlet of the Process HEPA filters drops below 120°C;

V.C.4.o. If the differential pressure of any Process HEPA filter element exceeds 5" water column or suddenly decreases, the affected HEPA must be isolated and the filter replaced;

V.C.4.p. Shutdown of the liquid waste feed shall be initiated if the offgas temperature at the Mercury Adsorber exceeds 200°C;

V.C.4.q. Shutdown of the liquid waste feed shall be initiated if the offgas temperature at the Mercury Adsorber drops below 120°C;

V.C.4.r. Shutdown of the liquid waste feed shall be initiated if the level in the backup Nitrogen Supply System falls below 35,000 standard cubic feet, which is equal to approximately 5 system volume equivalents.

V.C.~~4~~5. The following requirements apply to the ILWMS miscellaneous units containment sumps:

V.C.~~4~~5.a The liquid level in all tank sumps shall be monitored and recorded daily;

V.C.~~4~~5.b. The Permittee shall note in the Operating Record any rise in the sump level during waste management operations.

V.C.~~4~~5.c. If the liquid level in a sump exceeds the high/high setpoint or overflows the sump, the Permittee shall immediately comply with the requirements of IDAPA 58.01.05.008 [40 CFR § 264.196].

V.D. INSPECTIONS

The Permittee shall conduct inspections of the PEWE, LET&D, ~~and~~ ETS, and IWTU in accordance with the schedules found in Attachment 4 as amended by Permit Condition III.E.

V.E. RECORD KEEPING AND REPORTING

V.E.1. The Permittee shall document the following PEWE operations data in the Facility Operating Record:

V.E.1.a. Volume of waste fed to the PEWE;

V.E.1.b. Volume of PEWE bottoms waste and disposition;

V.E.1.c. Volume of PEWE condensate waste and disposition;

V.E.1.d. A calculation of material (steam) discharged per cycle from the PEWE System as a gas (i.e., Volume of discharge equals volume of input minus [volume of condensate plus volume of bottoms]);

V.E.1.e. Waste analysis data, including underlying hazardous constituents, for each waste stream processed;

V.E.1.f. Data demonstrating compliance with the operating requirements for the PEWE; and

V.E.1.g. Waste feed shut downs including cause of shutdown, if unscheduled, and measures to prevent repeat shutdowns from the same cause/operating conditions.

V.E.2. The Permittee shall document the following LET&D operations data in the Facility Operating Record:

V.E.2.a. Volume of waste fed to the LET&D;

V.E.2.b. Volume of nitric acids bottoms removed from the LET&D;

V.E.2.c. Material balance determination of the volume of water vapor discharged to the INTEC Main stack as a result of processing PEWE condensate;

V.E.2.d. Waste analysis data, including organic concentration and underlying hazardous constituents, for the condensate feed;

V.E.2.e. Data demonstrating compliance with the operating requirements for the LET&D; and

V.E.2.f. Waste feed shutdowns, including cause of shutdown if unscheduled, and measures to prevent repeat shutdowns from the same cause/operating conditions.

V.E.3. The Permittee shall document the following ETS operations data in the Facility Operating Record:

V.E.3.a. Volume of waste fed to the ETS;

V.E.3.b. Volume of ETS bottoms waste and disposition;

V.E.3.c. Volume of ETS condensate waste and disposition;

V.E.3.d. Waste analysis data, including underlying hazardous constituents, for each waste stream;

V.E.3.e. Data demonstrating compliance with the operating requirements for the ETS; and

V.E.3.f. Unscheduled waste feed shutdowns, including cause of the unscheduled shutdown and measures to prevent repeat unscheduled shutdowns from the same cause/operating conditions.

V.E.4 The Permittee shall document the following IWTU operations data in the Facility Operating Record:

V.E.4.a. Volume of waste fed to the DMR;

V.E.4.b. Weight of IWTU solids generated and disposition;

V.E.4.c. Waste analysis data, including underlying hazardous constituents, for each waste stream;

V.E.4.d. Data demonstrating compliance with the operating requirements for the IWTU; and

V.E.4.e. Unscheduled waste feed shutdowns, including cause of the unscheduled shutdown and measures to prevent repeat unscheduled shutdowns from the same cause/operating conditions.

V.F. CLOSURE

The Permittee shall close the PEWE, LET&D, ~~and~~ ETS Units, and IWTU in accordance with the approved Closure Plan, Attachment 8 of this Permit, as modified by Permit Condition II.K.

MODULE VI

CORRECTIVE ACTION

The Corrective Action Requirements for INTEC are addressed in the Volume 18 Partial-Permit.